GENERAL
PHYSICAL EDUCATION
Connecticut (State)

NORTHWESTERN UNIVERSITY LIBRARY

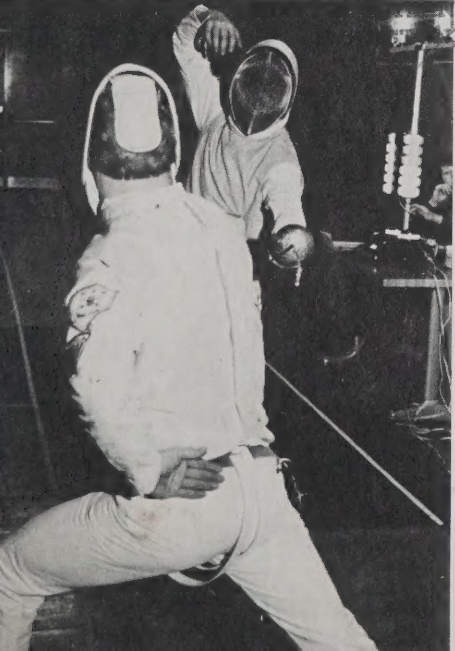
Basic Guidelines For Physical Education

3, 4, 5 Year Olds
6, 7, 8 Year Olds
9, 10, 11 Year Olds
12 and 13 Year Olds
14 and 15 Year Olds
16, 17, 18 Year Olds

State Department of Education Hartford, Connecticut

CURRICULUM COLLECTION
ILLINOIS 60201

CURRICULUM COLLECTION
NORTHWESTERN UNIVERSITY LIBRARY DE 29 '7
EVANSTON, ILLINOIS 60201



Connecticut State Board of Education

Mrs. Catherine V. A. Smith, *Chairman*	Hamden
Dayson D. DeCourcy	West Hartford
Mrs. Betty-Lou Dorin	Berlin
Mrs. M. Adela Eads	Kent
G. Eugene Goundrey	Middletown
Warren G. Hill	Glastonbury
Margaret Kiely	Bridgeport
Nicholas A. Longo	Putnam
John E. Toffolon	Riverton

Maurice J. Ross
Acting Secretary and Acting Commissioner of Education

NOT TO BE TAKEN [illegible] LIBRARY

NOT TO BE TAKEN FROM LIBRARY

Basic Guidelines For Physical Education

DE 29 '75

CURRICULUM COLLECTION
NORTHWESTERN UNIVERSITY LIBRARY
EVANSTON, ILLINOIS 60201

Written by

ALBERT A. ALEXANDER

with the assistance of the

CURRICULUM DEVELOPMENT COMMITTEE

NORTHWESTERN UNIVERSITY LIBRARY

Bulletin 117 ● 1973

Connecticut State Department of Education
Box 2219 ● Hartford, CT 06115

NOT TO BE TAKEN FROM LIBRARY

Acknowledgments

Many persons have contributed to the development of these physical education basic guidelines. Without their assistance and constructive criticism, the committee charged with the responsibility of formulating the document would have been less effective. Sincere appreciation is therefore extended to all who assisted in this manner. We are especially indebted to the Governor's Committee on Fitness for their support, as well as to those State Department of Education consultants and other professional colleagues who have generously devoted their time and energy reviewing drafts.

We also wish to express our sincere appreciation to members of the department's Editorial Board for meritoriously discharging their assigned duties. The following persons comprised this board:

Hollis Fait,
Professor of Physical Education,
University of Connecticut, Storrs

John Hajus,
Supervisor of Health and Physical Education,
Waterbury

Frank W. McCarthy, M.D.,
School Medical Advisor, West Hartford

Dora Metrelis,
Professor of Health and Physical Education,
Southern Connecticut State College,
New Haven

Maurice J. Ross,
Acting Commissioner of Education,
State Department of Education, Hartford

Curriculum Development Committee

Gay Amato,
Teacher of Physical Education,
Duffy School, West Hartford

Charles T. Avedisian,
Director of Physical Education,
Darien Public Schools

Matthew Barberi,
Director of Health and Physical Education,
Hamden Public Schools

Dorothy Bemis,
Assistant Supervisor of Physical Education,
Newington Public Schools

John S. Hichwa,
Teacher of Physical Education,
John Read Middle School, Redding

Virginia Moessmang,
Teacher of Physical Education,
Branford High School

Robert M. Pate,
Supervisor of Physical Education
Hartford Public Schools

Franklyn H. Robinson,
Teacher of Physical Education,
Hall High School, West Hartford

Mrs. Marilyn Strong,
Teacher of Physical Education,
Weaver High School, Hartford

Albert A. Alexander,
Consultant, Health and Physical Education,
State Department of Education, Hartford

CURR.
613.7
CTED
1973

STOS

Foreword

The process of education today is concerned with the total growth and development of the child. Physical education is an integral part of that process; it contributes to the psychomotor, cognitive, and affective development of the individual.

The physical education program should be a carefully planned, comprehensive, sequential progression of learning experiences designed to fulfill the growth, development, and behavior needs of each student. However, no planned program with suggested innovative content and teaching strategies can be any better than the creative and dynamic physical education teacher charged with the responsibility of implementation. Consequently, physical education teachers must translate basic as well as relevant physical education concepts into action programs based on the needs of each student.

It is our sincere hope that these guidelines will serve as a basic reference for local towns to utilize in developing and implementing quality sequential programs of physical education to meet effectively the specific needs and interests of their local schools. Local guides should provide concepts that, when translated into program experiences, should help every student attain his greatest potential development—psychomotor, cognitive, and affective.

Maurice J. Ross

Acting Commissioner of Education

gift

Contents

Foreword 3

A New Approach to Modern Physical Education 6

General Aims and Objectives 7

Chapter I 8
- State Laws Relating to Physical Education
- Regulations Governing Physical Education Teachers
- Curriculum Development Committee Recommendations

Chapter II 11
- Movement Education, Purposes and Objectives
- Lesson Ideas

Chapter III 21
- Program for 3-, 4-, and 5-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter IV 26
- Program for 6-, 7-, and 8-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter V 31
- Program for 9-, 10-, and 11-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter VI 38
- Effective Planning and Teaching of Elementary School Physical Education
- An Analysis of Movement Factors

Chapter VII 45
- Program for 12- and 13-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter VIII 52
- Program for 14- and 15-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter IX 59
- Program for 16-, 17-, and 18-Year-Olds
- Teaching Philosophy, Behavioral Objectives, Desirable Experiences

Chapter X 66
- Effective Planning and Teaching of Secondary School Physical Education
- Innovative Approaches
- Suggested Outlines for Programs for Girls and for Boys

Chapter XI 71
- Program for Exceptional Children
- Planning for the Handicapped Student

Chapter XII 84
- Suggested Extraclass Experiences for Students, Ages 9-18

Chapter XIII 89
- Class Organization and Administrative Procedures in Physical Education

Chapter XIV 97
- Extraclass Organization and Administrative Procedures in Physical Education

Chapter XV 100
- Policies and Procedures Related to Facilities, Equipment, and Supplies

Glossary 106

Appendices 110
- A—Laws Relating to Physical Education
- B—Certification Requirements
- C—Some Outstanding Programs
- D—Selected References
- E—Movement Analysis in Gymnastics
- F—Tests of Physical Fitness
- G—Suggested Equipment and Supplies

A New Approach to Modern Physical Education

A modern physical education program is a well-planned, comprehensive, sequential progression of learning experiences which contributes to the psychomotor, cognitive, and affective development of the individual through the natural medium of physical education.

It is a program for all children and has as its foundation a common core of learning experiences. This common core of learning experiences is concerned with efficient body management, physical, social, and intellectual development and total fitness through movement activities.

It serves the divergent needs of all pupils—the gifted, the slow learner, the handicapped, the culturally deprived, and the average—and is geared to the developmental needs of each child.

The pre-primary, primary, and intermediate programs should be movement oriented.

The pre-primary program should provide opportunities for pupils to begin to develop a foundation in body management and basic skills. It should seek to further develop eye-hand coordination with simple manipulative activities.

The primary program should provide for review and further development of basic movement skills learned at the pre-primary school level. It should provide opportunities for the pupil to express himself through movement and continue to develop the skills of verbal communication — speaking and listening.

The intermediate school program should provide opportunities for the pupils to develop a higher degree of proficiency in basic movement and to begin to synthesize those basic skills which are involved in increasingly complicated games, dances, and gymnastics. As a result of these experiences, pupils should be more capable of applying basic skills learned to more complex activities more efficiently, effectively, and creatively.

The lower secondary school program should provide review and application of all basic movement skills. In addition, it should be comprehensive enough to expose pupils to a broad and diversified program of activities in all physical education instructional areas. Students should be given opportunities to develop degrees of proficiency in all of the instructional areas.

On the middle secondary level the students should be provided with opportunities to refine the skills and reinforce the knowledge learned at the previous level or levels as well as to develop more effective strategy. Also the students might begin to select activities (within a required program) according to their interests and develop higher degrees of proficiency in them.

On the upper secondary level emphasis should be placed on lifetime activities with some team sports and dance activities provided.

There should be opportunities for elective learning experiences within the required program at the upper secondary level. On this level, students should be provided with opportunities to further refine and naturalize selected skills.

Such a comprehensive program should present the necessary skills which can be employed in a comprehensive intramural, interscholastic, as well as a personal, recreational program for all girls and boys.

To deal effectively with the whole child, many styles of teaching must be brought to bear on the learning situation. Consequently, innovative methods, concepts, and teaching strategies should be considered during the planning and implementation of the program.

General Aims And Objectives

A major purpose of education is to provide well-planned, individualized, developmental experiences for all youth. These experiences should prepare individuals to be active, healthy, intelligent, and responsible participants in society.

The school curriculum should provide for each pupil the opportunities needed for growth and development — psychomotor, cognitive, and affective — to the limits of the individual's capacity.

The physical education program as an integral part of the total educational process should provide for:

> *Organic Development* as it is concerned with maintaining a desirable level of health, fitness, and physiological function through development of organic systems of the body.
>
> *Psychomotor Development* as it is concerned with proficiency in the performance of physical activities. They include the coordinations, rhythms, accuracies, and poise that lead to excellence in executing various games, sports, and physical skills. It is concerned with cutting down wasted motion, while performing physical acts in a proficient, graceful, and esthetic manner, and with utilizing as little energy as possible in the process.
>
> *Cognitive Development* as it involves knowledge, sense perception and judgment, memory, imagination, creative ability, thinking and reasoning, and appreciations attendant to performing physical activities. It is concerned with an accumulation of knowledge essential to enriched living and the ability to think and interpret situations which are encountered in day-to-day living.
>
> *Affective Development* as it refers to adjustment both to self and to others and also to the development of desirable standards of conduct.

Chapter I

Legal Requirements, Preparation, and Certification of Teachers

Statutes, Regulations, and Recommendations Relating to Physical Education

There are three state laws which directly concern physical education. The first requires all towns to provide, among other designated subjects, a course of study in physical education, including methods to be employed in preventing and correcting bodily deficiency.[1] The same law also requires that the State Board of Education provide a state course of study for physical education, as well as for health education. This is done through publications such as this curriculum guide which is intended to serve as a framework for the local curriculum.

The second law directs local boards of education to set rules and regulations for the educational programs in their schools.[2] It is the local board's legal responsibility to set the local policies, decide upon and approve the content of the local programs of study, and to determine the requirements for graduations from their schools, e.g., required subjects, including those indicated in the law, credits, attendance, and the like.

The third law directs local boards to purchase such books, and such supplies, materials, and equipment as it deems necessary to meet the needs of instruction in the schools of the district.[3]

The Connecticut State Board of Education holds the position that, since the Connecticut law requires certain subjects be taught, it is therefore the intent that all boys and girls shall have such education. Further, the State Board of Education has gone on record to indicate that the "Course of Study . . . in physical education should be a planned, comprehensive, sequential K through 12 program."[4]

Other laws and regulations pertaining to physical education are:

Protection of Teachers, Employees, and Board and Commission Members in Damage Suits — Section 10-235 is related to the protection of teachers, employees, board and commission members in damage suits. This law is usually referred to as the "save harmless act."[5]

Health Examinations — Section 10-206 is related to boards of education requiring each pupil enrolled in the public schools to have a health examination either by a legally qualified practitioner of medicine or by the school medical advisor at least once in each three-year interval.[6]

Records Not To Be Public — Section 10-209 states that no record of any medical examination shall be open to public inspection.[7]

Standards for Construction of Public Buildings to Accommodate Disabled Persons — Section 19-235a is related to regulations or codes which govern the construction of public buildings to accommodate disabled persons.[8]

Construction Contracts, Modification of Standards — Section 19-235b is related to the approval or disapproval of construction contracts and the modification of existing standards.[9]

Regulations Related to Sections 19-235a and 19-235b — These regulations pertain to making buildings accessible to, and usable by, physically handicapped persons.[10]

Preparation and Certification of Teachers — The improvement of instruction in physical education is dependent to a large degree upon the preparation of well qualified teachers. This preparation is the responsibility of the teacher education institutions. Its implementation is the responsibility of the State Department of Education through statutory regulations for teacher certification.

All persons teaching physical education must have proper certification to teach in Connecticut. Sections 10-146-21, 10-146-22, and 10-146-23 are related to special subject or field certification. [11]

Coaches' Certification — Coaches of school teams engaging in interscholastic and intramural athletics must hold some type of valid teaching certificate.[12] Coaches' aides, when utilized, should work under the direct supervision or direction of a certified teacher.[12]

Physical Education Teacher and Classroom Teacher — When on the elementary level, the classroom teacher carries the major responsibility for conducting the physical education instructional period in the absence of the specialist, it is helpful for classroom teachers to have a minimum of six credits of college work in physical education consisting of theory, methods, and materials of physical education for elementary grades. These courses should provide them with some of the necessary competencies for teaching an elementary physical education program.

It is recognized that either male or female teachers may teach either boys or girls, or mixed classes. However, in certain situations, it may be desirable to have males teach only boys and females teach only girls.

Teacher Aides — Teacher aides, when utilized, should work under the direct supervision of a certified physical education teacher and only in a supportive and supplementary capacity.

Aquatics Teacher — The responsibility for teaching swimming should be delegated to a person who is qualified and holds a teaching certificate in the State of Connecticut. In addition, this person should have an American Red Cross Water Safety Instructor's certificate, a YMCA certificate, or any other recognized certificate of comparable standing, which indicates mastery of water-safety skills and knowledge of teaching methods suitable to this activity. The instructor should also possess an American Red Cross First Aid Certificate.

Legal Liability of Teachers and School Districts — Section 10-235 is related to the protection of teachers, employees, board and commission members in damage suits. This law is usually referred to as the "save harmless act."[13]

Boards of education are not liable for the injuries caused by the negligence of agents; however, each board of education shall protect and save harmless any agent from financial loss and expense arising out of any claim of alleged negligence while discharging his duties within the scope of his employment or under the directions of such board of education. Negligence must be proved by the plaintiff.

Because accidental injuries can occur in such a variety of ways, it is impossible to generalize regarding liability. The following suggestions should be applicable to most situations, however:

- When parents surrender the custody of their children to school authorities, they are entitled to expect the school people to exercise judgment and common sense to prevent avoidable injuries.
- Common sense dictates the necessity of supervision, particularly on playgrounds and in gymnasiums. The failure of a teacher to take care of his assignment to supervise school activities can result in personal liability of the teacher. Awareness of health status of students, safe equipment, and environment, and the use of proper first aid procedures are vital.
- When students are seriously injured in a physical education activity, much of the value derived from the activity is negated; and in such a situation, it must be considered that physical education has actually contributed detrimentally to the injured student's health.
- School boards should, by regulation, adopt minimum standards which specify the types of activities requiring supervision by members of the school faculty.

Teachers Working in Inner-City — Physical education teachers working in an urban environment and with little or no experience with inner-city youth should be encouraged to take a minimum of three credits in courses related to the environment and life styles of the disadvantaged child. This course, along with primary experiences in the school and community, should provide some basic competencies necessary to teach inner-city youth.

Undergraduate physical education majors expressing a desire to work in an urban environment should be encouraged to take two or more courses (6 credits) related to the environment and lifestyles of the disadvantaged child. A percentage of his time in student teaching should be spent in an inner-city school. He should also be encouraged to spend some time familiarizing himself with the community and its people. These experiences should provide the student with some basic competencies necessary to teach inner-city youth.

The Role of the Elementary Classroom Teacher — The classroom teacher's chief role in the elementary schools with respect to physical education is to provide the link that can result in a better total learning experience for the child. The teacher has an important part to play in helping the movement program make a significant contribution to the physical, motor, social, and interpretive development of the children.

The classroom teacher should never be completely separated from the physical education program. Provision should be made for the teacher to meet regularly with the physical education teacher. In some schools, where the team teaching technique is used, the physical education teacher should have an opportunity to meet with each team of classroom teachers regularly. Workshop days should be used to provide inservice training for classroom teachers.

Close and regular communication between the classroom teachers and the physical education specialists is needed for the following purposes:

1—To assess the needs of the group and especially of individuals in the class with special needs.

2—To insure that physical education teachers are informed regarding pupils who may be medically restricted.

3—To set goals for the year's physical education program which are in accordance with the educational objectives of the school and of the particular class.

4—To identify methods and activities through which the physical education program can be integrated with the other subject areas.

5—To provide first-hand knowledge to the classroom teacher so that such teacher can implement the physical education program effectively when assigned this duty.

6—To conduct a cooperative evaluation of the progress of students and of the results of the year's program.

Local Curriculum Development — With Emphasis On Innovative Programs — The curriculum committee recommends that every school system establish an ongoing committee whose function will be to maintain a continuing study of the physical education curriculum. The physical education curriculum should be open-ended and should accurately reflect the ever-changing needs and interests of the school population. Traditional physical education programs should be evaluated carefully to determine changes needed and how to implement them.

Local curriculum committees should strive to anticipate and initiate desired programs with a view toward maintaining an activity program that is always current and effective.

A physical education curriculum committee should include:

Students
Parents
Physical education personnel
Health education personnel
Elementary classroom teachers
Administrators
Pupil personnel services staff
Health services personnel

1—See Appendix A, Section 10-15. Towns To Maintain Schools.

2—See Appendix A, Section 10-221. Boards of Education To Prescribe Rules.

3—See Appendix A, Section 10-228. Free Textbooks and Supplies.

4—See Appendix A, The Commissioner's Interpretation of Section 10-15.

5—See Appendix A, Section 10-235. Protection of Teachers, Employees, and Board and Commission Members in Damage Suits.

6—See Appendix A, Section 10-206. Health Examinations.

7—See Appendix A, Section 10-209. Records Not To Be Public.

8—See Appendix A, Section 19-235a. Standards for Construction of Public Buildings To Accommodate Disabled Persons.

9—See Appendix A, Section 19-235b. Construction Contracts. Modification of Standards.

10—See Appendix A, Regulations Related to Sections 19-235a and 19-235b.

11—See Appendix B, Certification Regulations Related to Sections 10-146-21, 10-146-22 and 10-146-23.

12—Appendix B, Section 10-146-22. Provisional Certificates.

13—See Appendix A. Protection of Teachers, Employees, and Board and Commission Members in damage suits.

Chapter II

An Introduction to Movement Education

In recent years, there has been a tremendous change in the nature of elementary school physical education. The once game-oriented programs have been enhanced by the addition of programs which have movement as a focus. The name given to this approach to teaching is Movement Education.

Earlier methods of teaching drill, physical training, and physical education were chiefly concerned with anatomical and physiological effects. Present-day methods of teaching the more specific skills necessary in the major sports are similarly concerned with these factors, but in addition cover other aspects such as mechanics of movement and tactics.

Movement education, through relating to these factors, focuses on the analysis of movement through the components of time, force, space and flow. The quality and efficiency of any movement is dependent on the most effective application and blending of these movement factors.

Time refers to an observer's judgment of the amount of time it takes the action to occur. This may be sudden, quick, hasty, hurried, momentary, of short duration, or sustained, slow, leisurely, unhurried, prolonged.

Space refers both to the amount of space the body needs to perform the action and to the space pathway followed in the action. This pathway may be direct, straight, undeviating, threadlike, of unilateral extension, or flexible, wavy, roundabout, pliant, or multilateral.

Force refers to the amount of strength needed to complete the action. This may be strong, firm, heavy, gripped, or light, weak, buoyant, fine touch.

Flow refers to the manner in which the parts of the movement are connected. This may be bound, controlled, readily stopped, or free, fluent, streaming onwards, abandoned.

An examination is made of a movement by asking three major questions:

1—What part(s) of the body is (are) chiefly concerned in the movement?

2—How is it being moved? Quickly? slowly? forcibly? with little force? with continuity and control?

3—Where is it being moved? in general space? in personal space? At which level? high? low? on floor? on apparatus?

In addition to the above, movement education implies a changed role for the teacher. The teacher, in addition to being an organizer of activities, must be a person capable of analyzing movement, of recognizing individual differences in children's movement capabilities and of providing tasks to meet the individual needs of the students. The teacher is responsible for providing an environment that is free of rigid regimentation. Emphasis is placed on purposeful effort on the part of the children in finding solutions to tasks presented them, and on the development of a positive self-concept through finding success close to their individual capabilities.

Movement education presents the teacher with the challenge to become familiar with a whole new body of knowledge. In addition, the teacher must learn to teach using a problem-solving approach rather than using detailed direction on command.

Progression from the simple to the complex or from the basic to the specific is dependent on so many factors that it is difficult to provide a "cookbook" formula. Movement education is a personal interchange of ideas between teacher and child. Cues for the development of a movement idea in depth must be taken from the children and enriched by the tasks which extend each individual toward fulfilling the objectives of the work.

Some basic purposes of movement education are:

1—Provide the environment, guidance, and challenge for the development of movement concepts which, in turn, form a common denominator of experience and understanding on which individuals can draw for a variety of needs in the realm of movement.

2—Provide personal goals for each child so success is in reach of each child.

3—Help children to better understand their movement capabilities and to stimulate them to better master the many movement skills, both functional and expressive.

4—Create an environment in which the child is free to create and express himself.

Five major objectives of movement education are:

1—The development of body awareness and management through experience in movement tasks:

understanding self
body control
kinesthetic sense—the feel for movement
agility, strength, endurance

2—The development of understanding of movement:

quality and efficiency in movement
creativity in problem-solving—guided exploration
confidence and personal accomplishment
movement vocabulary and memory

3—The development of an understanding of space and directional concepts:

kinesphere-body space
room space
relationship of body space and room space

4—The development of relationships with other children:

cooperation
assisting each other

5—The development of a foundation of basic movement skills for future use.

The following are examples of lesson ideas that may prove helpful in planning local movement education oriented programs of physical education. The outlines were developed by Dorothy Bemis, assistant supervisor of physical education, Newington, Conn., public schools.

LESSON IDEAS

Class: Teacher Workshop

Theme: Elementary body management
Movement Idea: Weight transference
Lesson Ideas: Rocking and rolling, flight, steplike actions

Material	**Points To Develop**
Limbering: . . . . Moving about the gym on feet Springy jumps Light landings Vary takeoff and landing Moving about the gym on hands and feet Two feet, two hands One foot, two hands, etc.	Work on footwork, springlike actions. Use feet, ankles, knees, arms. Spring high, spring long. Landings—Meet the floor with resilience. Use whole foot, ankle, etc. Vary the speed—quick, slow Vary the direction—forward, backward, sideward.
Training:	
1—Weight over different body parts. Change to another support	Discover bits of body that can take the weight. Change from one support to another. Quick, slow, smooth, control, stretch. Make it skillful!
2—Find a way of taking weight onto back smoothly from any support	Transition! Flow!
3—Let this transition take you into rocking action	Encourage ways of transferring weight to adjacent body parts.
4—Work on ways of rocking and rolling to take weight onto different body bits—shoulder, knees, feet, etc.	Move from one support to the next and hold each position momentarily. Note: Can go to work on shapes over base, etc.
5—Task: Move about the gym. Lower body to floor into a *soft* roll. Continue into a sequence of three different rolls, ending in a balance. Repeat until you feel it is your best!	Ideas: Add challenge of symmetry and asymmetry. Same with varying speed. Same with change of direction. Work for flow. Try to develop real skill.
Note: This continuation would likely be another lesson for a class. Following the last task, the lesson would go on to the apparatus part of the content.	
6—Explore different ways of transferring weight from feet to hands and from hands to feet	Steplike actions. Encourage experimentation in direction, speed, level. *Stationary* and *traveling.*

NOT TO BE [illegible]

Teacher Workshop (contd.)

Material	Points To Develop
7—Take weight onto hands and make feet arrive in a different place. Try to get one foot high into the air, try to make feet pass in air . .	Kinesthetic sense of what is happening to other body parts. Consider landing on feet. Continue to travel by transferring over hands and feet. *Shapes* of body in air.
8—Explore different ways of springing into air from feet: stationary, traveling, with turn, five basic jumps	Guide exploration into work of takeoff in air and lending aspects of flight. *Explosive* takeoffs, *light* landings. "Weight element." Discuss basic jumps:
Task: Invent a sequence consisting of the five basic jumps. Be able to repeat with skill. Include at least one held position	Speed, level, direction. Find someone whose sequence you like and copy.
Apparatus:	
Mats, risers, ropes, stage, Lind Climber, incline plane, horizontal ladder, chinning bar	Apparatus set up in four stations, using creative ideas. Work in small groups, exploring ways of applying movement ideas to apparatus.
Tasks:	
1—Explore ways of applying training ideas to your apparatus	Teacher guides, coaches, and challenges individual students in their work.
2—Develop a sequence of movements on your apparatus, using training ideas.	
3—Travel about the apparatus, showing weight transference in different ways. Consider changes in speed and level. Work up a sequence.	
4—Invent a task which would extend children in application of movement ideas.	

Pre-primary and primary children enjoy experimenting in basic movements—running, hopping, moving about on hands and feet, etc. Movement skills, if developed early, contribute toward a lifetime of enriched living and recreational enjoyment.

Class: Kindergarten

Theme: Elementary body management
Movement Idea: Body awareness, weight control
Lesson Ideas: Floor work training, application of training to small apparatus, ball work.

Material	Points To Develop
Limbering: .... Move around the room on feet. Move in different directions. Move very slowly. Move very quickly. Move low. Move high. Springing and landing. Can you spring into the air and land lightly? What makes you land lightly?	Limbering serves to warm bodies and prepare for lesson. Develop space awareness. Don't bump anyone. Levels—high, low. Directions—forward, backward sideward. Time—fast, slow. Allow for exploration. Emphasize body control. Discuss this with children. Allow them to verbalize on what they are doing with their bodies. Point out children who are doing it well—e.g., "Let's all try to land as lightly as Suzie."
Training: .... Standing. Who is holding you up? Can one of them hold you up? Can you make a different shape with your body? Can you find other body bits to hold you up? On what different body bits can you travel along the floor? Perhaps you could change and move on other body bits.	Introduction of weight bearing. Discuss with children. Encourage them to think. Allow for individual creativity. Help individuals by coaching—e.g., "That is very good, but could you try that shape on the other foot?" Observe children and their ideas. Ask children what body bits they are moving on.
Sequence Work: .... Start in a still position on any body bits. Can you change *very slowly* to another position so that different body bits are holding you up? Change again! Change on signal. Change quickly.	"Movement Memory." Emphasize weight control in changing from one position to another. Encourage children to verbalize as to body parts involved.
Task: .... Choose three different positions with different body bits holding you up. Remember these positions. Show your first, second, third on signal. Can you change from one to the next by yourself? Start from standing. End standing.	Allow them to practice changing from one to the next to the next. Observe the children to see if they remember. Show in small groups.
Class Activity: .... Wooden blocks. How many tasks can our body do with the blocks? Walk around the block. Step on and off. Jump on and off. Jump forward, backward, sideward. Show different body shapes in air and on landing. Show different body balances on your block on different body bits.	The blocks provide a different level and an obstacle to add challenge to body control. Become familiar with the block. Work on springing jumps and light, controlled landings. Observe children's understanding of directions. Coach individuals to help them improve their ideas. Sequence work can be carried over here.

Kindergarten (contd.)

Material	Points To Develop
Wooden Blocks and Wands: .... Work with partner. Find a way of going under wand. Find a way of going over wand. What kind of a shape is your body in while doing this? Can you and your partner go under at the same time?	Set up so that you have good space. Body awareness in limited space. Do not knock the wand off. Suggest: long shapes, curled shapes, feet first, head first, etc. Encourage children with good ideas. Observe body control and help individuals to achieve movement efficiency.
Note: Refer to the "Movement Analysis" chart to clarify the basis of the theme—elementary body management—and the development of this in terms of effort and space. The movement elements of time, weight, space, and flow hold the clues to the development of movement efficiency. The more you think of these terms, you will come up with ideas for tasks.	
Ball Work: Bounce the ball while moving forward, backward, sideward. Bounce slowly, then quickly. Bounce ball, staying in one position. Bounce ball while walking around, running, turning. Move the ball in a circle. Bounce the ball to the right, then left. Move it from right to left, left to right. Bounce the ball two times. Take two steps. Repeat. Bounce the ball, clap, catch, etc. Bounce the ball, telling your age, number of wheels on a car, bike, etc. Explore different ways of rolling the ball on the floor.	An introductory class in ball work lays the groundwork for safe, controlled use of the balls in the classroom. Start in sitting position, letting the ball bounce and catching it. Use a signal to encourage quick control of ball. Encourage gentle finger control of the ball. Make the ball do what you want it to do. Don't let it get away from you. Don't bump into anyone. Watch where you are going. Encourage work with both hands. Observe and help individuals with concepts of right and left. Various tasks can be incorporated into the ball work: Hand-eye coordination; rhythm; counting; using different body bits to control the ball.

Ball work offers almost infinite opportunity for development of elementary body management—hand-eye coordination, rhythm—as well as verbalization, alertness, and memory.

Limbering develops awareness and warms the body in preparation for physical education activities.

Rope jumping is a versatile, challenging activity, promoting rhythm and timing. Children get tremendous pleasure from learning new stunts and patterns.

Class: First Grade

Theme: Elementary body management
Movement Idea: Weight bearing, weight reception; and weight transference
Lesson Ideas: Weight control at different levels and body shapes; sequence work, ropes

Material	Points To Develop
Limbering: Move about room on feet, quickly and slowly. Freeze in different body shapes. Find different ways of moving about on hands and feet, in different directions. Can you move both hands at the same time and both feet at the same time?	Purpose of limbering is to warm bodies and prepare for lesson. Moving and stillness. Space and time elements. Allow for exploration. Develop children's ideas. Awareness of direction at a different level. Additional challenge in weight control. Consider time, weight, space, flow.
Training: Start in a curled position. Slowly stretch parts of your body to take weight on another body bit. Start in a stretched position. Quickly curl and roll. Try to come to standing position. Start in a standing position. Spring into the air. Land in control and slowly sink to the floor, taking weight onto another part of your body. Finish with a roll.	Purpose of the training part of the lesson is to develop the movement idea and to provide the children with a wide variety of movement experiences in which they think and feel. **Note:** Movement terms such as curling, stretching, taking weight, rolling, etc., have been movement ideas of previous lessons. A child's "movement vocabulary" is extended as verbal terms become kinesthetic awareness. Work on transition into and out of various positions as a lead up to sequence work.
Sequence: Spring into the air. Land in control. Roll. Stretch onto other body bits. Curl. Roll to feet. Stand. Repeat.	Sequence work provides for the development of "movement memory"—e.g., Can you repeat the sequence in the same way? Develop according to observations. Have children observe one another. Discuss.
Small Apparatus. Ropes: Knotted Ropes: Tossing and catching, sitting, standing. Tossing rope, making it land in a particular spot. Moving ropes around different body shapes. Moving rope with different body parts.	Jump ropes are very versatile in providing movement tasks. Knotting ropes is a learning experience. Manipulative skills, hand-eye coordination, body awareness and control. Observe children and develop their ideas.

First Grade (contd.)

Material	Points To Develop
Rope in circle on floor: .... Moving into, out of, and around circle in different ways, e.g., curling inside, stretching across, etc. Moving on different body parts—one part, two parts, etc. Springing in and out with emphasis on directions—forward, backward, sideward.	**Space awareness.** Apply movement ideas. Weight over different body parts. Ask children to verbalize which body parts they are moving on. Emphasize directional concepts, body control, and balance. Try to develop quality in movement—i.e., lightness in landing, smooth movements, variation in speed.
Straight Rope: .... Moving along rope in different ways. Moving from side to side in different ways. Springing from side to side, counting jumps on each side. Rolling along rope.	**Note:** Various movement ideas can be developed with the ropes adding an extra challenge—i.e., spinning, twisting, turning.
Rope shapes: Place rope in any shape on the floor. Can you make the same shape with your body? Can you make your first initial on the floor with the rope?	
Limbering. Balls: .... General ball handling skills, working on assorted tasks. Make body into different shapes. Move ball under, over, around body and body parts. Show how the body can do what the ball can do—i.e., spin, roll, bounce.	**Note:** Small apparatus such as balls, wands, bean bags, badminton birds, etc., can be used as a warmup in a guided exploration-type activity. This activity is being included in this lesson to show the possibilities.
Training: .... Start low on the floor and slowly move upward, stretching as high as possible into one foot. Sink back down to low position. Balance. Then lose balance, carefully collecting yourself onto other body bits. Balance on two body bits in a low shape, a high shape. Balance on one bit of your body in a curled shape, stretched shape.	**Discuss:** What is balance? What helps you to hold your balance? Stillness, tension, breathing. Emphasize body and weight control in moving from a high position to a low position. Body awareness—Where are the free bits of your body? What unusual bits of your body can you balance on? Can you move from one shape to another in control? Flow—practice the transition from move to move. Think about each position and how to get there.
Sequence: Choose three different balances and show how smoothly and carefully you can move from one to the next, etc. Repeat.	

First Grade (contd.)

Material	Points To Develop
Apparatus. Lind Climber: Show movements on the apparatus: Over, under, through, around, between. Front, back, side movements. Slide, walk, hang, twist, turn. Curling, stretching, balancing. Try new ways of moving. Find ways that you can balance on the apparatus. Pause to think of what parts of your body are supporting you. Change to different balances. Can you balance using one part, two parts, three parts, four parts, etc.?	Use of apparatus: Acquaint children with new apparatus by having a few at a time working taking turns. Use simple tasks. Emphasize: space to move in without crowding; controlling body; landing lightly on mats; using all parts of the apparatus. Think about what you are doing. Apply training ideas to the apparatus. Observe children and make suggestions to help them clarify their movements. Have children observe each other and discuss—"Show and Tell."
Task: Move around from one part of the apparatus to another in as many different ways as possible without touching the floor or mats.	Tasks can be specific or general, depending on the experience of the children and the movement idea. They should provide for creativity within certain guidelines. The challenge can be greater to extend the children as they progress in skill and understanding.

Class: Fifth and Sixth grades

Theme: Intermediate body management
Movement Idea: Stretching and curling
Lesson Ideas: Sample lesson to show development of movement idea

Material	Points To Develop
Limbering: Springing, landing. Control of weight. Bits of body that can support weight. Make some kind of body shape over different bases.	Prepare body parts for activity. Acquaint students with teacher-method. Acquaint teacher with students. Lead into training aspect of lesson.
Training: Stretching—Stretch arms as far away from feet as possible. Make stretch take you low to the floor and take weight on hands and feet. Now onto other body bits. Show a stretched position over any base. Very slowly, stretch any part of your body to take weight in another way. Explore ways of stretching by taking weight over hands—inverted stretch.	Feel the complete stretching action of all body parts—fingers, neck, arms, etc. Stretching—high, low. Explore body bits that can bear weight. Stretch free parts. Body part or parts as far as possible away from the center of body. Use drum or signal to change position at own time as well. Emphasize moving and stillness. Be sure complete extension is felt. Extend those students who have good control with weight over hands.

Fifth and Sixth Grades (contd.)

Material	Points To Develop
Curling: .... Standing, bring all parts of your body as close to the center of your body as possible. Show this curled position over different bases. Lying on back. Show alternately a curled position and a stretched position. Can you travel along the floor showing alternate stretching and curling?	Body image—close to and away from body center. Encourage inverted positions. Incorporate other themes which might have been covered previously—i.e., rocking and rolling, weight bearing and transfer, etc. Emphasize *clarity*. Be sure extremes of stretched and curled positions are felt and understood. Point out extension, contraction, breathing. Choose better sequences to show class and discuss.
Class Activity: Refer to outline "Organization Considerations."	
Note: Bean bags, wands, balls, jump ropes, magic ropes, risers, etc., could be used to develop the "movement idea."	**Note:** Consider the "effort qualities" as noted on the movement analysis chart. Any one of these could be emphasized, depending on observations.
Mats placed in good spaces .... **Task**—Approach the mat with a run. Spring into the air, showing a stretched position. Land in control. Show a curled movement along the mat. Finish in a stretched, *still* position. Repeat until you can show a skilled sequence. Add riser to mat for change of level, additional height to spring from.	**Note:** Flight is included here but not as the main theme. **Observe:** Clarity of the movement idea, body control, flow of sequence, time elements—quick, slow, sustained. Could develop weight over hands in a stretched position over riser, etc.
Apparatus: Class divided into groups .... a. Ropes, mats, risers b. Stage, risers, mats c. Horizontal bar, incline ladder, mats d. Climber (two bars, uneven), incline plane mats	**Note:** Rotate groups according to time available. Could spend one period on training, next period on apparatus, but it is better for carryover and continuity to do both in same lesson. Use creativity in setting up the apparatus. Could allow children to set up their own apparatus the way they want. Try to relate apparatus set up to movement idea.
Tasks: **1**—Explore ways of applying movement idea apparatus—i.e., show curling and stretching movements using all bits of apparatus. 2—Prepare a sequence consisting of curling and stretching movements. 3—Work on sequence until it is skillful. Show body control.	Encourage use of all apparatus in the set up, and cooperative use of the apparatus, awareness of one another. Coach individuals and groups. Give hints for connecting moves, speed of execution, flow, clarity, moments of stillness, beginning and end of sequence. Repetition of moves at different levels, etc. Show sequences in groups or individually.

Chapters III through V will present an overview of the components of today's physical education program in what is usually referred to as pre-primary, primary, and intermediate grades. Appropriate references will be presented.

Chapter III

Program for 3, 4, and 5-year-olds

Basic Characteristics, Needs, Interests, and Program Implications

These basic characteristics, needs and interests represent an average. Consequently, wide individual variations should be expected and respected. Ages 3-5.

Bodily Growth

Characteristics: Growth steady and slow. Large muscles are better developed than small ones. Bones somewhat soft. Muscular strength is limited. Heart and lungs small in relation to height and weight. Heart growing rapidly. Various parts of the body develop at different rates. The legs grow faster than the arms; arms grow faster than the trunk; and the trunk faster than the head. The average gain in weight during this period is 4½ pounds a year. The annual growth in height averages 2½ inches. The preschool period is a period of tooth and bone building.

Needs, Interests, and Program Implications: Need large muscle activity through movement. Large apparatus helps the child gain control over his body, by climbing, hanging, swinging, and supporting his body in various positions. Children should explore all forms of locomotion and have the opportunity to experience the use of manipulative objects, such as balls, ropes, hoops, and bean bags. Frequent relaxation and rest periods. Large space for play. Activities requiring some responsibility but little or no pressure. Opportunities for pre-schoolers to try out their skill with a variety of equipment is more important and enjoyable than success in use.

Psychomotor Development

Characteristics: Walking and running are well established. Climbing is natural and easy, since the child grips well with his hands. Full of energy but easily fatigued. Child very active. Gross motor control of fingers and hands incomplete. Use of trunk, arms, and legs precedes skill in use of hands and fingers. Motor skills unevenly developed.

Maturation major factor in the development of skills. Knock-knees and pronation now tend to disappear. Child learns to jump down, and later does a small broad jump. Binocular vision is developing, but, because fine focus is not possible, eye-hand coordination is rudimentary only. Eyes slow to focus and usually far-sighted. Rapid increase in controls over general bodily skills and hand control. Is interested in what body can do. Likes to use hands. Skill in ball handling is just beginning to develop.

Needs, Interests and Program Implications: Same activities for both boys and girls. Activities that aid in perceptual motor development are important. Opportunities should be provided for the child to use many avenues for learning, touching, seeing, moving and listening. Initial experiences in movement should be largely exploratory, and guided exploration should focus on finding many different ways of accomplishing simple tasks. Fundamental skills of throwing, catching, bouncing balls. Music and rhythm with skills. Needs opportunities to handle objects. Needs practice in balance, unilateral, bilateral, and cross-lateral movements. Give some attention to posture problems.

Practice of specific skills in advance of suitable maturity is inappropriate. Adequate playthings to encourage vigorous bodily play as well as to develop manual skills and to train sense perception. Change activity often.

Affective Development

Characteristics: Sensitive and individualistic. Friendly, affectionate, helpful, curious, likes to talk, has temper tantrums, threatens. Some are shy and avoid group activity while others are self-assertive and domineering. Anxious to do things well. An age period of fun-fantasy-fear. In spite of temper outbursts can accept and tolerate restrictions where necessary. Anger is provoked less by physical discomfort, more by difficulties with situations. The expression of anger is more often verbal; there is less physical aggression. Control of anger improves as various skills develop. Fear is often learned from fearful adults. The child's dominance over others depends on his self-confidence in any situation; training can improve self-confidence.

Needs, Interests and Program Implications: Needs feeling of belonging. Praise, encouragement, love and approval are all important. Need to learn to work and play independently while at the same time learning to live effectively with other children by sharing, taking turns and respecting the rights of others. Avoidance of humiliation. To succeed and fail and accept both gracefully. Young children should not have to compete with older ones.

Cognitive Development

Characteristics: Rapid expansion of both understanding and use of language occurs. Great intellectual curiosity, many questions. Attention span is short and related to motivation. Love of rhythm, imitation, dramatics, and creativeness.

Needs, Interests and Program Implications: Experiences should be provided that will help children increase their verbal skills, both speaking and listening. Select activities that will reinforce perceptual learnings such as shape, size discrimination, and that will reinforce spatial concepts of up, down, over, under, around, on, off, and through. Encourage thinking by presenting tasks that allow the child to find his own way of doing; for example, find as many ways as you can to balance. Child should be free to develop own spontaneous play activities.

Physical Education for 3, 4 and 5-year-olds

Teaching Philosophy

The pre-primary school physical education instructional program should be a movement oriented program.

The program should be centered around movement experiences, for it is through movement experiences that the young child learns about himself, who he is, what he can do, and how he relates to the world around him. It is through movement experiences also that he develops his psychomotor, cognitive, and affective skills.

A large majority of suggested experiences for the pre-primary school program are individual in nature, centering on body management, rhythms, manipulative skills, apparatus, stunts, and tumbling.

The types of experiences are such that the child has good opportunity to explore, try out, and create. He learns to express himself through movement and continues to develop the skills of verbal communication — speaking and listening.

The program at this level should provide opportunities for pupils to begin to lay the foundation for body management and basic skills. It should seek to further develop eye-hand coordination with simple manipulative activities. The child's fitness needs are taken care of within his movement experiences. Perceptual-motor competency theory (related to laterality, directionality, balance, and coordination) has strong application to methodology on the pre-primary level.

These well-planned experiences should be geared to meet the divergent developmental needs of all pupils — the gifted, the average, the slow learner, and the mentally and physically handicapped.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but rather as models for local towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 3, 4, and 5-year olds, will demonstrate degrees of proficiency in body management skills appropriate for 5-year-olds as measured by teachers' behavioral rating scales.

Example 1.1: At the completion of the physical education program for 3, 4, and 5-year-olds, the pupil will exhibit a level of competency so that when presented with a body management problem related to moving in different ways on different parts of the body, the pupil may solve the problem by running, hopping, crawling, or rolling with proficiency.

Goal 2: The pupils completing the program for 3, 4, and 5-year-olds will demonstrate degrees of refinement in rhythmic skills appropriate for 5-year-olds as measured by teachers' behavioral rating scales.

Example 2.1: Upon completion of the physical education program for 3, 4, and 5-year-olds, the pupil will exhibit a level of competency so that when presented with a rhythmic task related to contrasting movements, the pupil may execute the task by traveling very lightly, moderately *heavily* or very *heavily* with precision.

Goal 3: The pupils completing the program for 3, 4, and 5-year-olds will demonstrate degrees of proficiency in manipulative skills appropriate for 5-year-olds as measured by teachers' behavioral rating scales.

Example 3.1: At the completion of the physical education program for 3, 4, and 5-year-olds, the pupil will exhibit a level of competency so that when presented with a manipulative task related to tossing and catching, the pupil may execute the task by tossing the ball at different heights and catching it alone or with a partner.

Goal 4: The pupils completing the program for 3, 4, and 5-year-olds will demonstrate degrees of proficiency in apparatus, stunts, and tumbling skills appropriate for 5-year olds as measured by teachers' behavioral rating scales.

Example 4.1: After having completed the program for 3, 4, and 5-year-olds, the pupil will exhibit a level of competency so that when presented with an apparatus task related to balancing, he may execute the task by hopping the length of the balance beam forward, sideward, and backward with proficiency.

Goal 5: The pupils completing the program for 3, 4, and 5-year-olds will demonstrate cognitive achievement in physical education appropriate for 5-year-olds as measured by teachers' observation systems.

Example 5.1: At the completion of the program for 3, 4, and 5-year-olds, the pupil will exhibit a level of competency in cognitive skills that will enable him to comprehend who he is, what he can do, and how he relates to the world around him.

Goal 6: The pupils completing the program for 3, 4, and 5-year-olds will demonstrate affective achievement in physical education appropriate for 5-year-olds as measured by teachers' observation systems.

Example 6.1: Upon completion of the program for 3, 4 and 5-year-olds, the pupil will respond positively toward movement education as demonstrated by his willingness to participate in all activities.

Desirable Experiences

Body Management: Management of the body refers to physical control of the body in a variety of movement situations in relation to environmental demands. Basically, proper management of the body is needed to counteract the forces of gravity in normal activity. Good body management implies that the child can make unilateral, bilateral, and cross-lateral movements with ease and in good balance.

Pre-primary school pupils should be provided with opportunities to develop basic body management skills. Much of the activity will be in the form of self-initiated exploration, providing adequate time for the child to find his own way of handling his body on the floor and on apparatus. The child should begin to learn what the body can do, how the body can move, and where the body can go, encompassing movement factors of time, force, space, and flow.

Body Management Experiences: The maintenance of good body mechanics, control and balance of the body in different positions, rhythm of movement, coordination and efficient movement, management of the body effectively on the floor (as in balance or flexibility stunts), moving across the floor, in the air (off the floor), and suspended on apparatus, efficient use of force in all locomotor and non-locomotor experiences; perceptual-motor-competency—the concept of laterality, which has a correlation with children having learning difficulties; the ability to control the two sides of the body separately and simultaneously must be developed.

Sample Tasks and/or Problems: Tasks and/or problems may be designed by the teacher involving:

1—Changes in size and shape of the body. Can you be very big, very little?

2—Moving in different ways on different parts of the body. Can you run? Hop Jump? Roll?

3—Changes in speed as you move. Can you run very fast? Very slow?

4—Stillness and balancing. Can you balance on one foot? On some other part of your body?

5—Use of apparatus in general ways such as going over, under, around, on and off.

Dance is both an expressive movement and a learning process. It is unsurpassed as an activity for the development of coordination, self-expression, and creativity.

Rhythms: Movement can be defined as either functional or expressive. Dance is expressive movement, adapted to communicate an idea, mood, or imagined feeling. Dance is a learning process, designed to provide children with the opportunity and movement vocabulary to express themselves through movement and, in doing so, to enrich their self-concept and movement awareness. Not only are dance experiences a tool for self-expression, but inherent in rhythmics are excellent possibilities for physical development. Progress toward the perfection of simple skills is enhanced by the accompaniments of rhythm.

The pre-primary school rhythmic program should include beginning work in the area of educational dance and rhythmic activities. The focus should be on exploration with very simple individual work on body and space awareness.

Rhythmic Experiences: All forms of locomotor or non-locomotor movements, identification rhythms, dramatization, and singing games.

Sample Tasks and/or Problems: Tasks may be designed by the teacher around the following program ideas:

1—Tasks involving using the body expressively. Can you move softly? Do something to show you are strong.

2—Tasks involving contrasting movements. Travel very lightly. Now very heavily.

3—Tasks involving all forms of locomotion, such as running, skipping, hopping, jumping, etc.

4—Tasks involving movement to rhythm instruments such as a drum or to records.

5—Tasks involving imitation such as becoming an animal or object, and moving appropriately.

6—Singing games and story plays such as Looby Loo, the Muffin Man, and Farmer in the Dell.

Manipulative Skills: Manipulative activity is one in which a child handles some kind of play object, usually with the hands, but it can involve the feet and other parts of the body. Manipulative activities invite strong application of basic movement methodology, adding an important dimension to movement experiences. The emphasis is on skillful manipulation of the object being used. The focus changes from the body alone as in floor work to the body in relation to the object being used. Manipulative activities can strengthen both hand-eye and foot-eye coordination, as well as develop dexterity in handling a variety of play objects.

Pre-primary school children should be offered a basic manipulative skills program. Basic manipulative skills should be taught through the exploratory approach of basic movement. The beginning skills learned at this level should set the foundation for the more precise manipulative skills at the higher levels.

Considering the lack of hand and eye coordination at this level, it is recommended that the beginning activities with balls be largely exploratory and unstructured.

Manipulative Experiences: Children should be encouraged to explore and seek understanding about handling balls by catching, throwing, bouncing, rolling, and dribbling. Different ways of batting a ball with the hand can be investigated. Children may combine such simple locomotor skills as walking while manipulating small apparatus. Activities involving the use of bean bags, wands, hoops, ropes, and other small apparatus are appropriate for this age level.

Sample Tasks and/or Problems: Tasks may be designed by the teacher around such ideas as:

1—Balancing objects. Can you balance the bean bag on different parts of your body?

2—Bouncing and rolling. Can you bounce the ball? Roll the hoop?

3—Tossing and catching. Can you toss and catch the ball or bean bag? Alone, with a friend.

4—Moving the object with various parts of the body. Can you move the ball with your feet? Hands? Elbows?

5—Free use of manipulative objects with the child using the objects as he pleases. Emphasis is on keeping the object under good control and playing with it in such a way that it doesn't interfere with the activities of others.

The bean bag is another basic tool for spurring locomotor development and movement exploration. It can be used for numerous rhythmic and manipulative experiences.

Apparatus, Stunts, and Tumbling: Work on apparatus is an extension of the floorwork described in the preceding section. The many themes developed on the floor are readily adaptable to apparatus. Exercising on overhead and climbing apparatus has strong physical effects on the grip, arm and shoulder girdle. It develops the ability of the child to support his weight and to manage his body free of ground support. Such experiences help the child develop strength, coordination, balance, agility, courage, self-confidence, and initiative. Variety in apparatus activity can be enhanced by the addition of tumbling. Tumbling stunts add another dimension to the movement possibilities.

Pre-primary school pupils should be offered basic apparatus and tumbling experiences which will provide a firm foundation on which to build more formal skills of gymnastics. A variety of simple stunts involving gross body movements, opportunity for creative expression, control of balance, and directional concepts should be introduced.

Apparatus, Stunts, and Tumbling Experiences: Climbing and hanging: climbing ropes, horizontal ladders, climbing frames, the exercise bar; apparatus placed on the floor: balance beam, activities on benches, activities on jumping boxes, magic ropes, individual mats, balance boards, bounding boards, gym scooters, combination sets. Variety in apparatus activity can be enhanced by the addition of stunts and tumbling activities; such as side roll, forward roll, back roller, see-saw, kangaroo, etc.

Sample Tasks and/or Problems: Tasks and/or problems may be designed by the teacher around such ideas as:

1—Hanging from apparatus. Can you bend only the knees and hang on? How many different ways can you hang?

2—Using the balancing beam. Can you stand on the balance beam, jump down to the floor with both feet on one side, and then jump back up? How else can you mount and dismount the beam?

3—Using the climbing rope. Can you run, jump, grasp a rope, and swing?

4—Tumbling. How many ways can you do a forward roll? Side roll?

5—Balancing. Hop the length of the beam forward, sideward, and backward.

Chapter IV

Program for 6, 7 and 8-year-olds

Basic Characteristics, Needs, Interests, and Program Implications

These basic characteristics, needs, and interests represent an average. Consequently, wide individual variations should be expected and respected. Ages 6-8.

Bodily Growth

Characteristics: Relatively rapid structural growth. Large muscles are still better developed than small ones. Bones remain somewhat soft. Muscular strength is limited. Heart and lung small in relation to height and weight. Heart growing rapidly. Uneven development of body parts. The chest grows faster than the abdomen, legs faster than the trunk, and the face faster than the head. Pulse and breathing rates decline, moving gradually toward their adult levels.

Needs, Interest, and Program Implications: There is a strong inner urge for vigorous activity and this natural urge for joyful movement should be utilized and emphasized. Children of this age need to take part in a wide variety of activities of brief duration. Need opportunity for handling hand apparatus. Practice in perceptual-motor skills—right and left, unilateral, bilateral, and cross-lateral movements. Practice of skills in advance of suitable maturity is largely wasted.

Psychomotor Development

Characteristics: Child very active. Still easily fatigued. Gross motor control of fingers and hands still incomplete. Use of trunk, arms and legs precedes skill in use of hands and fingers. Motor skills progress unevenly. Eyes still slow to focus and usually farsighted. Likes to use hands. Rapid increase in controls over general bodily skills and hand control. Interested in what the body can do. Child's speed of reaction is about half that of the adult. The child can catch medium-sized balls and use a full arm swing as he throws from the shoulder. Can bounce and catch a ball well and kick a ball on the run. Can jump over small objects. Child can do forward roll by age six and develop fair form in the handstand and the cartwheel. More complex climbing and balance skills develop. Child is ready to learn swimming skills by the age of six, if not earlier.

Needs, Interests, and Program Implications: Children should learn to manage their bodies efficiently through a program of movement which develops body management skills both in space and on large apparatus. Children should work with manipulative skills using such hand apparatus as balls, ropes, wands, hoops, and bean bags which enhance their perceptual motor development. Adequate equipment to encourage vigorous bodily play, as well as to develop manual skills and train sense perception, is needed. Daily periods of instruction in vigorous physical activity as well as daily periods of supervised free play are essential.

Affective Development

Characteristics: Friendly, affectionate, helpful, curious, likes to talk, has temper tantrums, threatens. Child is egocentric. Child's normal emotional development continues to depend on security and acceptance. Emotional reactions differ; some are shy and avoid group activity while others are self-assertive and domineering. Sex consciousness is of no importance. Can accept and tolerate restrictions when necessary. Struggling between his need for help and his urge to be independent. Anxious to do things well. Expression of his emotions are more controlled, therefore more removed from the source and harder to understand. Anger in social situations and in play groups is expressed, at six and seven, by some fighting. Fear of physical danger is somewhat dispelled by developing skill and courage.

Needs, Interests and Program Implications: Children of this age have a strong need for success, for self-expression, and for teacher approval. While individual activities are essential, there is a need for introducing group activities to help each child merge his individual abilities and interests with those of other children. Praise, encouragement, and love are important. Avoid humiliating youth.

Cognitive Development

Characteristics: Great intellectual curiosity, many questions. Attention span is short and related to motivation. Continued rapid expansion of both understanding and use of language. Love of rhythm, imitation, dramatics, and creativeness. Accuracy in sense judgment approaches perfection. Reasoning and problem-solving become more adequate in direct proportion to the opportunity the child has to reason and solve simple problems.

Needs, Interests and Program Implications: Motor activities instead of abstract learning. Problem solving, discovery, creativeness and exploration are essential ingredients in helping young children to think. Experiences should be provided that will help the child understand how his body moves and will gradually develop a movement vocabulary for future learning.

Physical Education for 6, 7 and 8-year-olds

Teaching Philosophy

The primary school physical education instructional program should provide for review and further development of all basic movement skills learned at the pre-primary school level.

The experiences at this level should continue to be individual in nature for six-year-olds but should evolve to be individual, small group, and large group in nature for seven and eight year olds.

Emphasis should continue to be placed on body management, rhythms, manipulative skills, apparatus, stunts, and tumbling.

The program should continue to provide opportunities to explore, try out, and create. It should provide opportunities for the pupil to express himself through movement and continue to develop the skills of verbal communication—speaking and listening.

The primary school program should place emphasis on mastering basic movement skills and learning to use them more efficiently, effectively, and creatively.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but rather as models for local towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 6, 7, and 8-year-olds will demonstrate degrees of proficiency in body management skills appropriate for 8-year-olds as measured by teachers' behavioral rating scales.

Example 1.1: At the completion of the program for 6, 7, and 8-year olds the pupil *will increase* his level of competency so that, when presented with a body management problem related to weight bearing, the pupil may solve the problem by standing on one foot, arms and knees, or hands and feet with increased proficiency.

Goal 2: The pupils completing the program for 6, 7, and 8 year-olds will demonstrate degrees of refinement in rhythmic skills appropriate for 8-year-olds as measured by teachers' behavioral rating scales.

Example 2.1: After having completed the program for 6, 7, and 8-year-olds, the pupil will increase his level of competence so that, when presented with a task involving movement to rhythm instruments, the pupil may execute the task by traveling to the beat—fast, slow, medium, and/or high-low with increased proficiency.

Goal 3: The pupils completing the program for 6, 7, and 8-year-olds will demonstrate degrees of proficiency in manipulative skills appropriate for 8-year-olds as measured by teachers' behavioral rating scales.

Example 3.1: Upon completion of the program for 6, 7 and 8-year-olds, the pupil will increase his level of competence so that, when presented with a task involving a single piece of apparatus and a partner, the pupil may execute the task by playing toss and catch with a partner, one bounce or two bounces, toss and catch over or through something with increased proficiency.

Goal 4: The pupils completing the program for 6, 7 and 8-year-olds will demonstrate degrees of proficiency in apparatus, stunts and tumbling skills appropriate for 8-year-olds as measured by teachers' behavioral rating scales.

Example 4.1: At the completion of the program for 6, 7, and 8-year-olds, the pupil will increase his level of competency so that, when presented with an apparatus problem involving climbing the rope in different ways, the pupil may solve the problem by climbing, using hands and feet, hands and knees, or hands only with increased proficiency.

Goal 5: The pupils completing the program for 6, 7, and 8-year-olds will demonstrate cognitive achievement in physical education appropriate for 8-year-olds as measured by teachers' observation systems.

Example 5.1: At the completion of the program for 6, 7 and 8-year-olds the pupil will display his ability to utilize movement terminology to describe movement experiences.

Goal 6: The pupils completing the program for 6, 7 and 8-year-olds will demonstrate affective *achievement* in physical education appropriate for 8-year-olds as measured by teachers' observation systems.

Example 6.1: After having completed the program for 6, 7 and 8-year-olds, the pupil will respond positively toward interaction with his peers as demonstrated by his eagerness to participate in small group and large group activities.

Desirable Experiences

Body Management: Emphasis should continue to be placed on basic movement and apparatus activities. However, the exploratory process should change from one which is largely self initiated to one which is guided by the teacher towards the development of more specific skills. This process cannot be rushed, as it is important that the educational process at this age level be success oriented, providing the child with tasks that allow for a variety of solutions. Group lessons should focus on "themes" and not "specific skills." For example, the teacher might present a problem of finding ways to balance, guiding the child towards finding more difficult ways of balancing in relation to his ability. For some children it will be a headstand, for others something more simple.

Primary school pupils should be provided with opportunities to increase their proficiency in basic body management skills learned at the pre-primary level.

Body Management Experiences: Body management experiences will include basically the same experiences found in the pre-primary program. However, group lessons should focus on "theme" and not on specific skills. Some shift in emphasis will be necessary, depending on the needs and interests of the individuals. Tasks and/or problems may become more complex, and pupils will be expected to increase their proficiency in these experiences.

Sample Tasks and/or Problems: Tasks may be designed by the teacher around such themes as:

1—Balancing. How many parts of your body can you balance on? Can you balance on one hand and one foot? On two hands and one foot? On head and two feet? On head and two hands?

Balance is essential to efficient movement. The better a child can balance himself, in various positions, the greater his self-confidence and self-image.

2—Connecting one movement smoothly to another. Can you fall and roll? Run, then jump? Connect any three movements together without stopping?

3—Traveling. Can you travel with only your feet touching the floor? Feet and hands only? Hands only? What other parts can you travel on?

4—Supporting. Can you support yourself on a piece of apparatus using arms only? Feet only? What other parts of your body can support you while on apparatus?

5—Movement sequences. Can you go over something, under something, and end in a balance on something?

Rhythms: Rhythmic activities are enjoyed by children of this age as they pass from the "I" to the "We" stage of development. Educational dance continues to play an important part in helping children express their feelings through movement. Children of this age enjoy working with a partner on simple dance themes such as contrasting movements, one being light and one being heavy. Also included in rhythmic activities are all forms of locomotor or non-locomotor movements, identification rhythms, dramatization and singing games and dances.

Primary school children should be provided with opportunities to continue to develop and refine basic rhythmic skills learned at the pre-primary level.

Rhythmic Experiences: Rhythmic experiences will include basically the same experiences found in the pre-primary program. However, children of this age level will work more with a partner. Some shift in emphasis will take place depending on the needs and interest of the pupils. Rope jumping, musical games, and simple folk dances may be added. However, emphasis should continue to be placed on basic fundamentals such as walking, hopping, jumping, skipping, and others.

Sample Tasks and/or Problems: Tasks may be designed by the teacher around the following program ideas:

1—Contrasting movements with or without partners. With a partner, each do something that shows one person is strong and the other is weak.

2—Tasks involving movement to rhythm instruments. Can you travel to this beat? (fast, slow, medium). Can you turn from high to low to this beat? (fast, slow, medium).

3—Rhythmic jump rope with or without music. At this age it is probably better to emphasize developing one's own sense of body rhythm in jumping rather than adapting it to an external rhythm such as a record.

4—Tasks involving imitation such as becoming an animal or object and moving appropriately.

5—Simple folk dances appropriate to this age level.

Primary school children should be offered opportunities to continue to develop and refine basic manipulative skills learned at the pre-primary school level. As the program progresses to the upper primary level, bowling, paddle, and ball activities enter the picture.

Manipulative Experiences: Manipulative experiences will basically include the same experiences found at the pre-primary level. Partner work with manipulative objects; simple ball games and relays may be added. Striking skills are quite relevant particularly to boys at this level. Pupils will be expected to increase their proficiency in these skills.

Sample Tasks and/or Problems: Tasks may be designed by the teacher around the following ideas:

1—Tasks involving a single piece of apparatus such as a ball, hoop, wand, etc. Can you bounce the ball? High? Low? Fast, then slow? Can you roll the hoop?

2—Tasks involving a single piece of apparatus and a partner. Can you toss and catch with your partner? On one bounce? Over something?

3—Tasks involving two or more pieces of apparatus with a partner. Can you roll the hoop while your partner tosses a bean bag through the hoop?

4—Tasks involving striking. Can you strike the ball with different parts of your body? Can you punch the ball hard so that it goes high? Now soft and low?

5—Tasks involving making up simple games. Can you and your partner make up a game to play using one or more pieces of hand apparatus?

Apparatus, Stunts and Tumbling: Emphasis should continue to be placed on apparatus, stunts, and tumbling activities. However, the exploratory approach should change from one which is self-initiated to one which is guided by the teacher toward the development of more specific skills.

Primary school children should also be provided with opportunities to continue to develop and refine basic apparatus, stunts, and tumbling skills learned at the pre-primary school level.

Apparatus, Stunts and Tumbling Experiences: Apparatus, stunts and tumbling experiences will include basically the same experiences found in the pre-primary program. Emphasis should be placed on simple partner stunts at this level. Activities such as the three point tip-up, backward curl, forward roll variations, frog hand stand, and headstand may be added at this level. Pupils will continue to be provided opportunities to increase their profiiciency in activities learned at the previous level.

Sample Tasks and/or Problems: tasks and/or problems may be designed by the teacher around such ideas as:

1—Swing and jump. Can you swing and jump? Add half and full turns?

2—Climbing. How high can you climb up the rope? How fast? How many ways?

3—Roll. Can you do a forward roll? Backward roll and sideward roll in a sequence?

4—Imitate an animal. Can you walk like the turtle? Bear? Gorilla?

5—Pulling your body. Can you pull your body along the bench while lying on your stomach? While lying on your back?

> Physical education has definite relationships to education in general, to health education, and to recreation. The problem in education is to lead pupils in a variety of activities in order to accomplish desirable objectives. The results which come from participation in activities are directly related to the nature of the activities . . . Therefore, physical education is one part of education in general—that part of the school program concerned with the development and adjustment of children through the use of movement experiences. Physical education activities are valuable educational activities which deserve a fair share of the school time.
>
> —N. P. Neilson, Winifred Van Hagen, James L. Comer,
> *Physical Education for Elementary Schools*

Chapter V

Program for 9, 10, and 11-year-olds

Basic Characteristics, Needs, Interests, and Program Implications

These basic characteristics, needs and interests represent an average, consequently, wide variations should be expected and respected. Ages 9-11.

Bodily Growth

Characteristics: Going from steady to fairly rapid growth; height and weight increases may be faster in girls than in boys. Some children may be overweight. Some children reach adolescent spurts in which there is rapid growth of arms and legs. Secondary sex characteristics appear. A few girls may begin menstruation by ages 11 or 12; girls are a year or two ahead of boys in physical maturity and development. Rate of growth correlates with the degree of sexual maturity. Muscular strength is not equal to growth. Heart and lungs are in proportion to height and weight. Growth process of each individual is peculiar to his own time pattern and growth cycle. The average annual growth during this period is seven pounds in weight and two inches in height. The rate of growth (gain for size) in height and weight gradually falls off during childhood.

Needs, Interests and Program Implications: Continue vigorous program. Separate sexes for some activities. Exploration of new areas of movement and constant reviewing of those already learned. An increase in strength and endurance is necessary. Activities requiring dexterity should be utilized and form and rhythm stressed. Attention to postural habits and corrections of remediable defects through referral to qualified personnel. Stress correct movement fundamentals and posture.

Psychomotor Development

Characteristics: Coordination is good. Reaction time is improving. Although strength is not comparable to growth, child shows interest in his own strength and endeavors to improve it. Children take great pride in physical performance. Some children may become more awkward during part of this period due to unusual growth spurt. Girls may be better skilled during part of this period than boys. A marked maturation of motor skills occurs during the latter part of this period. Locomotion is steadier and is characterized by better form. Ball handling skills increase; there is better balance and footwork in kicking. Bats, rackets, and clubs are readily used to propel balls. Sex differences in general are more pronounced. Girls exhibit better form in tumbling, swimming, and dance; boys in ball control and all skills involving strength. Teachers must recognize individual rates of development and therefore cannot set arbitrary standards for a grade in learnings involving motor skills.

Needs, Interests and Program Implications: Continued emphasis on teaching and refining movement skills. Include lead-up games in the latter part of this period. Need to offer activities that demand a higher degree of skills than those offered in lower grades. Include coeducational activity. Fast moving activities are possible for this group; more rhythmic activities for girls than boys. Special help should be given to those whose skills are inferior to the majority of the class. Activities involving running, jumping, throwing, catching, kicking, and striking are needed to improve coordination. Large apparatus activities are important to further develop the child's ability to climb, hang, swing, and support his body in many positions. Experiences in aquatics if facilities are available. Daily periods of instruction and daily periods of supervised free play.

Affective Development

Characteristics: In spite of his independence, the youngster still wants love and affection from parents and teachers, but this affection is not openly sought nor should it be obtrusively expressed. Child is seeking balance between self and others, demanding, bossy, raises voice when angry or tired, more responsible, enjoys competition, needs to succeed, becomes discouraged easily, likes to exceed other fellow, developing team and group loyalties, needs to belong to a club or group. Period of hero worship, physical deviations from the averages, emotional conflict and frustration may lead to social difficulties, emotional disturbances, and delinquency. Interest in opposite sex shown by hitting, teasing, and chasing. Girls become more interested in boys than boys in girls. The child's acceptance by his own group is essential to his feeling of security. Child is beginning to have insight into the emotional life of others. With adult guidance, the child can learn to accept surface differences in race, religion, and ability, and to look for basic human likenesses beneath the surface.

Needs, Interests and Program Implication: Need opportunity for unregimented play. Need to separate boys and girls at the intermediate level for most activities but very important to have some coeducational participation. Games involving partners or team play will aid in developing cooperation. Success oriented activities should be offered. Extra help should be given to children low in motor skills. Team play, sportsmanship, leadership, and the ability to follow should be developed.

Cognitive Development

Characteristics: Child interested in self, his or her own future, and in other people and matters outside own experience. Able to carry on group intellectual discussions and activities. Attention span lengthens, and perseverance develops; these vary greatly with individual, and with interest in task. Desire for knowledge.

Needs, Interests and Program Implications: Emphasis on problem-solving approach to teaching in order to continually involve the child in the thinking process as it relates to all aspects of physical movement. Children should seek understandings related not only to what the body can do, but also to how the body can move. Children can learn to analyze movement and to apply movement terms to better understand how to perform beginning sport skills. Children should learn basic rules of culturally relevant sports and games. They are capable of evaluating and expressing their own point of view adequately. They are beginning to plan ahead and can handle fairly long-range assignments.

Physical Education for 9, 10, and 11-year-olds

Teaching Philosophy

The intermediate school physical education instructional program should be built upon the foundation of skills, knowledges, and attitudes acquired at the pre-primary and primary levels. Opportunities should be provided for pupils to develop more precise movement skills to be used at the lower secondary level.

Emphasis should be placed on body management rhythms, manipulative skills, stunts and apparatus, aquatics, lead-up games, and developmental activities. Basic movement principles are to be incorporated throughout the program, particularly in the teaching of skills.

The intermediate program should provide opportunities for the pupils to develop a higher degree of mastery of basic movement skills and to begin to synthesize those basic skills which are involved in increasingly complicated games, dances, and gymnastics. As a result of these experiences, pupils should be more capable of applying these basic skills to more complex skills more efficiently, effectively, and creatively.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but rather as models for local towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of proficiency in body management skills appropriate for 11-year-olds as measured by teachers' behavioral rating scales.

Example 1.1: At the completion of the program for 9, 10 and 11-year-olds, the pupil will further increase his level of competency so that, when presented with a body management task involving proper landings, the pupil may executive the task by landing and staying in place by bending the knees; landing off balance, collapsing and rolling, or connecting landings to other movements with increased proficiency.

Goal 2: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of refinement in rhythmic skills appropriate for 11-year-olds as measured by teachers' behavioral rating scales.

Example 2.1: Upon completion of the program for 9, 10, and 11-year-olds, the pupil will further increase his level of competency so that, when presented with a rhythmic task involving mirroring activities to music, the pupil may execute the task by copying the movements of another to music with increased proficiency.

Goal 3: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of proficiency in manipulative skills appropriate for 11-year-olds as measured by teachers' behavioral rating scales.

Example 3.1: Upon completion of the program for 9, 10 and 11-year-olds, the pupil will further increase his level of competency so that, when presented with a manipulative problem involving how many ways he can dribble a ball, the pupil may solve the problem by dribbling with the left hand, right hand, or by alternating hands with increased proficiency.

Goal 4: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of proficiency in apparatus, stunts and tumbling skills appropriate for 11-year-olds as measured by teachers' behavioral rating scales.

Example 4.1: At the completion of the program for 9, 10 and 11-year-olds, the pupil will further increase his level of competency so that, when presented with an apparatus problem involving use of climbing ropes, the pupil may solve the problem by climbing up one rope, transferring to another and descending, then climbing both ropes together with increased proficiency.

Goal 5: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate proficiency in lead-up game activities appropriate for 11-year-olds as measured by teachers' observation systems.

Example 5.1: After having completed the program for 9, 10 and 11-year-olds, the pupil will increase his lever of competency so that, when required to play a basketball lead-up game, he may select one goal basketball and perform with proficiency.

Goal 6: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of proficiency in aquatic skills equal to achievement standards or established local norms appropriate for 11-year-olds as measured by American Red Cross tests.

Example 6.1: After having completed the program for 9, 10 and 11-year-olds the pupil will increase his level of competency in aquatic skills so that, when required to submerge and recover objects, he will execute the task with proficiency.

Goal 7: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate degrees of physical fitness equal to norms appropriate for 11-year-olds as measured by the AAHPER Youth Fitness Test.

Example 7.1: At the completion of the program for 9, 10 and 11-year-olds, the pupil will develop a level of fitness so that, when given the AAHPER Youth Fitness Test, he will equal or exceed the norm.

Goal 8: The pupils completing the program for 9, 10 and 11-year-olds will demonstrate cognitive achievement equal to norms or other achievement standards appropriate for 11-year-olds as measured by knowledge tests.

Example 8.1: Upon completion of the program for 9, 10, and 11-year-olds, the pupil will develop a level of competency in movement education that will enable him to assist in judging or evaluating the performance of his peers.

Goal 9: At the completion of the program for 9, 10 and 11-year-olds will demonstrate affective achievement in physical education appropriate for 11-year-olds as measured by teachers' observation systems.

Example 9.1: At the completion of the program for 9, 10 and 11-year-olds the pupil, through a success oriented program, will enhance his self-concept as demonstrated, by his leadership ability, followership ability, and abilities to share, cooperate, and assist less skilled individuals.

Desirable Experiences

Body Management: Intermediate school children should be provided with opportunities to continue to develop and refine body management skills. As the child matures, he should begin to become more competent in the management of his body and should begin to acquire useful physical skills.

Work in basic movement and apparatus activity should not be neglected with this age group, for it is through skillful manipulation of the body that children are provided with the tools for being successful in all areas of physical education.

Opportunities should be provided for students to develop the ability to combine tumbling and dance or rhythmic movement together to form sequences suitable and adaptable for free-exercise.

The exploratory process should continue to be one which is guided by the teacher toward the development of more refined and specific skills.

Body Management Experiences: Body Management experiences will include basically the same experiences found in the primary program; however, increased emphasis will be placed on guiding the child toward more difficult and challenging solutions as well as more proficient performances.

Sample Tasks and/or Problems: A few specific ideas relating to tasks which may be designed by the teacher are:

1—General tasks involving many of the previous movement lessons of the primary grades such as ways of balancing, curling and stretching, rocking and rolling, etc., with increased emphasis on guiding the child towards more difficult and challenging solutions to tasks presented him.

2—Specific tasks involving stunts and tumbling focusing on the movement aspects of performing the stunts such as curling when rolling and stretching when balancing.

3—All forms of gymnastic activities. Girls particularly seem to enjoy gymnastic apparatus work such as bars, beam vaulting.

Jumping not only develops muscles, it also improves timing, balance, and other skills needed in most sports and games.

4—Tasks which involve various forms of flight. Flight gives the child time in the air which is necessary to perform certain skills whether it be jumping to catch a ball, high jumping in track, somersaulting in the air, or merely leaping or jumping and forming various shapes in the air. Flight may be obtained by jumping from the floor or off some piece of apparatus such as a box. Boys particularly like lessons involving flight and much can be learned which will be useful in many sports, as jumping is basic to most games.

5—Tasks involving proper landings. Landing and staying in place by regaining balance through bending the knees. Landing off balance, collapsing and rolling. Jumping into the air and landing on something in balance. Connecting landings to other movements such as running, jumping, landing and rolling.

Rhythms: Experiences in educational dance can lend much to movement program at this level. Children of this age are better able to respond to a beat and to coordinate their movement to music. Girls seem to enjoy working with dance themes which involve movement which is light and graceful and has feminine qualities, while boys enjoy the more robust forms of expression associated with strength or anger such as slashing and striking movements and which display masculine qualities.

Traditional folk and square dance can be successful at this age level if the teacher is able to establish the right social environment. It must be remembered that this is an age when boys and girls are most socially divergent and oftentimes attempts at this type of dance are not successful, nor do the children approach them with a great deal of enthusiasm. Much depends on the teacher and the level of social development of the group.

Rhythmic Experiences: Rhythmic experiences will include basically the same experiences found on the upper primary level. Lead-up types of dances, mixers, and rope jumping make up the bulk of the program, with some inclusion of musical games and fundamental rhythm activities of the manipulative type. Children enjoy working alone as well as in small groups developing patterns of their own.

Sample Tasks and/or Problems: Suggested tasks or ideas which the teacher may wish to develop are:

1—Such educational dance themes as meeting and parting, passing and following.

2—Mirroring activities in which one child tries to copy the exact movements of another.

3—Acting out themes such as love, hate, anger, sadness, happiness, and carefreeness through movement sequences.

4—Folk and square dances appropriate for the age level of the class.

5—Rope jumping alone, with partners or in small groups and ball skills to music. Also included in these activities can be stick dances such as tinikling, and parachute activities to music.

Manipulative Skills: Intermediate school children should continue to be provided with opportunities to develop, refine, and master manipulative skills. The bulk of movement emphasis is concentrated on manipulative activity. As the program progresses to the upper intermediate level, pupils should develop the ability to apply manipulative skills learned to more complex lead-up and game type activities.

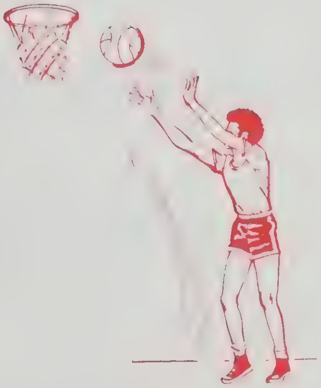
Manipulative Experiences: The program should be composed of basically the same experiences found at the upper primary level. The emphasis is on skillful manipulation of objects and the ability to transfer learned skills that are appropriate and applicable to more complex activities.

Sample Tasks and/or Problems: Tasks and/or problems may be designed by the teacher around such ideas as:

1—Ball task. Can you dribble the ball with the left hand? Alternate hands?

2—Shooting baskets. How many ways can you shoot a basket?

It is not until the intermediate grades that boys and girls get their first real chance to play basketball. No other sport offers a better medium for learning body control and manipulation.



3—Volleying. Working with a partner, how many successful volleys can you do? Working with three others.

4—Balancing bean bags. Can you walk while balancing a bean bag on your head? On other parts of the body.

5—Tossing and catching. Can you toss a ball with one hand and catch it with the other hand? Catch it with two hands?

6—Hitting. Can you hit a softball with a bat? From the right side? From the left side?

Apparatus, Stunts, and Tumbling: There is little change in the amount of emphasis placed on apparatus, stunts, and tumbling. Apparatus, stunts and tumbling experiences, naturally, become more challenging and more difficult to achieve. More emphasis is placed on form and execution.

Intermediate school children should be provided with opportunities to continue to develop, refine, and master apparatus, stunts, and tumbling skills learned at the previous levels.

Apparatus, Stunts and Tumbling Experiences: Apparatus stunts and tumbling experiences will include some of the activities from the upper primary program. Experiences added will include forward roll combinations, backward roll combinations, knee jump to standing, headstand variations, back extention, handstand, cartwheel, headspring, dive forward roll, forearm stand.

Sample Tasks and/or Problems: Tasks and/or problems may be designed by the teacher around such ideas as:

1—Traveling carrying an object. Can you travel the length of the horizontal ladder carrying a beanbag, ball or any other similar object?

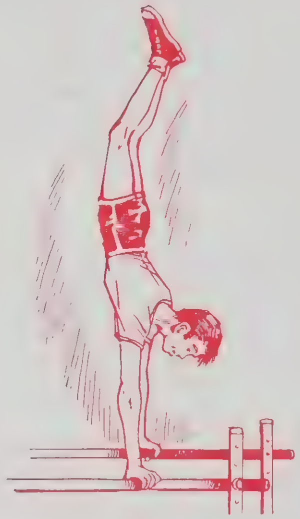
2—Stunts and tumbling sequence. Can you perform any three stunts and/or tumbling activities in succession? Four? Five? Six?

3—Horizontal bar, balance beam and rope.

4—What activities can you perform on the horizontal bar? Balance beam? Climbing rope?

5—Climbing ropes. Can you climb up one rope, transfer to another and descend? Climb both ropes together?

6—Working with a partner. What can you do with a partner on the parallel bars?



In the intermediate grades, apparatus and tumbling skills learned at lower levels are further developed and refined.

Lead-up Game Skills: Participation in team sports appeals strongly to the interest of children at the intermediate level. Children need an opportunity to develop the necessary skills for successful participation in team sports. Therefore, a comprehensive program of lead-up games and an introduction to track and field experiences are necessary. Through participating in lead-up oriented activities, children have an opportunity to refine manipulative and other movement skills learned and apply them to more specific as well as complex lead-up game activities.

Intermediate school pupils should be provided with opportunities to develop and refine lead-up game skills. Offensive and defensive play along with rules should be added to the skill base. Such a base facilitates the learning of more complex team games at the lower secondary level.

Equipment and supplies used in teaching lead-up game experiences should be appropriate for the age levels involved.

Lead-Up Game Experiences: Captain basketball, sideline basketball, twenty-one, one-goal basketball, keyhole basketball, three-on-three, five-three-one and basketball; keep away, football end ball, kick over, pass ball and touch or flag football; soccer keep-away, line soccer, circle soccer, kickball and soccer; throw it and run bat ball, kick softball, five-hundred, four-base softball, beatball and softball;

newcomb, wall volley, keep-it-up, one-bounce volleyball, cage volleyball and volleyball; dashes, floor hockey, jogging, relays, striding for distance, long jump, high jump hop, step, and jump and hurdling.

Sample Tasks and/or Problems: The teacher should provide opportunities for the pupils to:

1—Select and organize teams and play basketball lead-up games.

2—Select and organize teams and play a football lead-up game.

3—Select teams and play a softball lead-up game and other lead-up games to team sports.

As interest heightens in team sports, intermediate youngsters respond eagerly to participation in softball, soccer, volleyball, and other group games.

4—Play different position in the lead-up game.

5—Participate in some appropriate track and field activities.

Aquatics: Swimming instruction should be provided for pupils at the intermediate level. By this time the skill development of most children is sufficiently advanced for them to profit readily from aquatic instruction. In many cases primary school pupils are able to accomplish considerable swimming safety skill. Thus, those school districts which have the facilities should begin swimming instruction as soon as is practicable.

Intermediate school children should develop and refine basic swimming skills and the ability to apply them in more advanced swimming activities at the lower secondary level.

Aquatic Experiences: Orientation to the water, submerging and recovering objects, floating and regaining standing position, buoyancy in the water, fundamental swimming skills, styles of swimming, diving, remedial swimming, fundamentals of water safety, boat safety, stay afloat activities and some aquatic games, relays and individual feats.

Sample Tasks: Tasks may be designed by the teacher similar to the following:

1—Submerge under water for 10 seconds without holding on to the side of the pool. Open eyes and count fingers.

2—Can you tuck-float (5 seconds) and recover to standing position?

3—Can you push off using front float, kick legs in flutter kick going as far as possible?

4—Can you jump in from the side of the pool in water chest deep, level off, and swim across pool? Return?

5—Dive in water eight feet deep; swim across the pool on the front, turn around before touching the side of the pool, and return.

6—Can you swim for one minute in deep water?

7—Can you bob up and down ten times with rhythmic breathing (exhaling under water and inhaling as the head rises above the surface)?

Chapter VI

Teaching Suggestions and Sources for Effective Planning and Teaching Elementary School Physical Education

General Teaching Suggestions

1—Present activities in a simple-to-complex progression.

2—Pupil should be allowed to work creatively at his own rate of speed and within the range of his ability.

3—Provide the children with ample room to move.

4—Plan for full activity for all the children as much of the lesson time as possible—no standing or waiting time.

5—Try to give work for all the major areas of the body during every lesson.

6—Adapt the problem (question) to the level of the pupil. Make it purposeful, enjoyable, and challenging.

7—Some rules that must be followed for safety reasons are (1) stop and start on command, (2) know where you are going, (3) be aware of and avoid others moving in the class, (4) set space limits for movement away from obstacles, and (5) develop safety rules for pupils using apparatus.

8—Care should be taken in phrasing the problems so that each problem will bring about several responses from every child.

9—Be familiar enough with physical skills to know when a problem is being solved incorrectly.

10—Encourage original responses.

11—Try not to demonstrate. Let each child find his own way of moving to answer the questions. If they need encouragement, individual children may be asked to show their solution to the task.

12—Do not be afraid to repeat problems. The children will perform with more skill and invent variations on the original questions.

13—Children must have the opportunity to explore with manipulative apparatus before the teacher imposes too many limitations.

14—Provide children with the opportunity to experiment and find out for themselves (under teacher guidance) why one method is more effective than another.

15—Establish one certain signal when they are to start or stop an activity (interchanging signals become confusing).

16—Keep the discussion to a minimum. Emphasize exploration by using lead-in phrases such as "Who can . . ." "Show me . . ." "Can you . . ." "How many different ways . . ."

17—Have some idea of the response the children are likely to make.

18—Encourage original responses to be different from everyone else.

19—Encourage the clumsy and timid.

20—Use imagery occasionally, but not often enough to make children dependent on it.

21—Use rhythm instruments sparingly at first. A uniform rhythm used too early may style the variety, spontaneity, and inventiveness of responses.

22—Look around for materials which can be utilized as improvised apparatus (car tires, boxes, broom handles, barrels).

23—Discussion should follow exploration in order that children may analyze their movements and identify the elements contributing to successful performance.

24—Use action or image-evoking words, such as "freeze" instead of "stop" to gain children's attention. A loud drum beat or hand clap is also effective.

25—Begin the class with movement. Discussions or demonstrations are more effectively presented when the children are somewhat physically tired.

26—Be aware of what each child is doing. Let each child know that you are aware of what he is doing.

27—Continually evaluate, with the pupil, how many activities he can do and how well he performs them.

Specific Teaching Suggestions

Body Management: Capitalize on the child's inner urge for vigorous activity and creativity.

Add the environment, challenge, and encouragement by setting tasks based on sound movement principles.

Work with movement concepts basic to many activities.

Guide the development of a movement sense through which meaningful common denominators are established in the performance and understanding of movement skills.

Extend and refine the movement experiences of each child to bring out the best performance.

A safe environment, without limiting creativity, is a matter of sound teacher judgment and the preparation of children to safely cope with their own body in movement.

Rhythms: Assess students to determine readiness and starting point. Determine background and experience in body management concepts.

Pre-Primary: Focus on exploration with very simple individual work on body and space awareness.

Primary: Develop movement ideas in more depth with thinking and moving.

Intermediate: Develop refinement and clarity in execution of movements and application to dance sequences both individual and group.

Progression should be based on moving from the simple to the complex, the known to the unknown, and the general to the specific. Encourage creativity, expression and, aesthetic experience.

The stimulus for dance may be selected from music, rhythm, sounds, poetry, prose, pictures, sculpture, moods, colors and any number of objects.

Explore the possibilities of integrating program with other disciplines (art, music, social studies, etc.).

Manipulative Skills: Activities should range from discovery sessions to classes where specific tasks are explored in depth. Each child should be provided with his own piece of manipulative apparatus.

Emphasize keeping an eye on the object being caught and on the target when throwing. Stress laterality and directionality, and work at different levels.

Children should throw about chest high to a partner unless a different type of throw is specified. Stress a soft receipt of the object when catching by "giving" with the hands, arms, and legs.

Apparatus, Stunts and Tumbling: Beginning activities should be of an exploratory nature and each student should be encouraged to work at his ability level. Children should be instructed in the proper way to set up, arrange, and take down apparatus.

Groups should be formed with each group having the responsibility for setting up and taking down the same pieces of apparatus each lesson. Teachers, as a general rule, should not support the student while he is on the apparatus.

Personal safety should become the responsibilty of each child through learning to work within the limits of his capabilities and with concern for other children.

Hand apparatus such as wands, hoops, and ropes may be used in conjunction with larger apparatus to make the task more varied and challenging. For example, a hoop can be placed on the floor next to a box and the task might be to jump from the box and land in a balanced position in the hoop.

Review previously learned materials and practice lead-up activities to the stunts to be presented.

Lead-up Game Skills: Using the same basic framework in manipulative skill work, the teacher can devise numerous tasks for children to work on alone or in small groups. Tasks selected are dependent upon the specific skills to be taught.

Emphasis should be on developing a reasonable level of competency in the activity. Provide maximum participation through small group work.

Playing of games recreationally with a full complement of players should be delayed for after-school intramurals and class work should focus on constant activity with no lines or waiting for turns.

Aquatics: The movement education technique may be used in teaching swimming.

Children at this level need careful supervision and almost constant attention while in the water. A class which contains beginners should not exceed 20 pupils for each teacher. There should not be more than 30 pupils to each teacher during a class period.

It is desirable for the classroom teacher to participate when possible. Some qualified parents may also be used as teaching aides to assist the instructor in record keeping and to help supervise the dressing of children.

Much time should be spent in acclimating the child to the new environment through shallow-water confidence drills, breath-control exercises, games, and self-safety skills.

An Analysis of Movement Factors

The following outline is a breakdown of the movement factors to help you understand the depth of the material. It is impossible to separate them from each other in movement. However, the focus can be on the development and understanding of a particular aspect of the total movement picture. Thus, a movement theme and/or movement idea would contain the material for a lesson or series of lessons.

Body Management

THE WHAT. The body. It is essential that designed learning experiences include tasks related to:

All aspects of locomotion and stillness.

All aspects of weight bearing.

All aspects of weight transference and reception.

Rocking, rolling, flight, steplike actions, preparing body parts to receive weight, etc.

All aspects of possible body actions.

Curling, stretching, twisting, turning, swinging, etc.

Various combinations of these movement ideas.

Preparing and showing movement sequences according to the movement idea.

Observing the movements of other children.

THE HOW. Effort and Quality. It is essential that both teachers and children strive for quality in their movements and not be satisfied with variety in movement as the only objective. The following movement factors lend themselves to:

Force. It is essential that designed learning experiences include tasks related to . . .

Movements in which the quality of the action is dependent on the degree of lightness (soft, light, bouncy, springy, delicate).

Movements in which the quality of the action is dependent on the degree of strength (strong, forceful, heavy, firm, stable).

Actions involving varying degrees of tension.

Demonstrating contrasts in quality of force.

Time. It is essential that designed learning experiences include tasks related to . . .

Movements which can be done fast, faster.

Movements which can done slowly, more slowly.

Encouraging responses from children which demonstrate their understanding of variation of speed, including acceleration and deceleration.

Encouraging responses from the children which demonstrate the use of speed variation to bring about the most efficient execution of movements.

Movements which can be executed and/or combined in rhythmical patterns.

Flow. Continuity, control. It is essential that designed learning experiences include tasks related to . . .

Body control in a variety of situations.

Combining movements with the emphasis on the ease and efficiency of the transition.

The feel of quality in movement.

Combining movements into sequences which demonstrate understanding, execution, and quality.

THE WHERE. Space. Personal space (kinesphere). It is essential that designed learning experiences include tasks related to . . .

Exploring body parts in space.

Relationship of body parts to each other.

Body shapes over different supports.

Level of body (low, high) and relationships (higher, lower).

General space. Room space. It is essential that designed learning experiences include tasks related to . . .

Body movements in various directions.

Variations in spatial relationships with other children.

Level.

Pathways and floor patterns.

Rhythms

THE WHAT. The basic body actions can take the form of dance. Body parts move to a given rhythm, contacting each other or the floor. Certain body movements become gestures. Twisting actions become slashing to express anger. Curling and stretching become opening and closing. Spring, leaping, spinning, whirling, galloping, darting, pouncing, freezing, and many other expressive body actions can take a child into a world of magic.

THE HOW. The understanding and application of effort actions help provide the dancer with the vocabulary to express ideas with clarity. A young child must experience the elements of effort actions for the feel of it.

The force elements of strong and light with the varying degrees, combinations and contrasts, provide an abundance of material for creative dance. Add to this the time elements of fast, slow, sudden, and sustained, as well as the directional aspects of direct and indirect, and the results are effort actions.

Slashing, pressing, thrusting, dabbing, wringing, floating, gliding, and flicking are the eight basic effort actions which result from particular combinations of the elements of time, force, and direction. Linking movements in various combinations and sequences, with concern for flow quality and finish, provide additional challenge.

THE WHERE. Spatial aspects of movement in both personal (kinesphere) and general space provide material for exploration into body shapes, level directions, and pathways. This may lead to individual, partner, and group dances. Traditional folk and square dances and singing games are simply a combination of body movements, effort actions, and spatial relationships. Given these movement ideas to work with, children can create their own dances.

With these ideas from which to work, a creative and imaginative teacher can guide children through exciting and educational movement experiences and still maintain the creativity, imagination, and magic of the child's world.

Manipulative Skills

THE WHAT

Throwing
  sidearm
  overhand
  underhand

Catching
  object in flight
  object on ground

In the child's world, imagination and movement blend together. Such expressive body actions as springing, whirling, and twisting can create magic for the elementary school youngster.

Striking
  with hands
  with feet
  with body parts
  with implements such as paddles, wands, rackets, bats

Handling
  balancing
  pushing
  pulling
  carrying

THE HOW

Force
  strong, weak
  hard, soft
  heavy, light

Time
  fast, slow
  variations in speed still as in doing a balance

Flow
  going and stopping as in throwing and catching
  continuous as in bouncing and rolling

THE WHERE

In personal space
In general space
Alone or with a partner or in small groups

Direction
  forward
  backward
  sideward
  upward
  downward

Level
  high
  medium
  low

The above outline presents the basic variables involved in working with manipulative skills with a movement approach. Teachers may design tasks focusing on one or more aspects of the above. The nature of the task will vary in relation to the object being used. Some sample tasks might be:

Ball Task—
WHAT. Tossing and catching a ball.
HOW. Softly with good control.
WHERE. In personal space, upwards.

Task with Bean Bags—
WHAT. Balancing bean bags.
HOW. On different parts of the body.
WHERE. Traveling through general space.

Task Involving Striking—
WHAT. Striking a ball (small tennis type).
HOW. First with the hand, then with a paddle.
WHERE. In personal space, downward, then upward.

The creative teacher can devise numerous tasks and will be limited only by her imagination. Changing one or more of the variables can offer endless possibilities for making tasks increasingly complex and challenging.

Apparatus, Stunts and Tumbling

THE WHAT: Experiences should be provided that enable the children to become skillful in such activities as balancing, climbing, vaulting, hanging, swinging, chinning, and other supportive type movements. Beginning activities should be of an exploratory nature. Children should be given enough time to use the apparatus somewhat freely at first in order to become acquainted with getting on and off, and learning to work safely with concern for other children using the apparatus at the same time.

THE HOW: Tasks selected for apparatus work may be an outgrowth of activities covered in the floor work. Themes such as traveling on different parts of the body, and balancing may be explored on the apparatus. In addition such tasks as going over, under and around the apparatus as well as getting on and off in various ways, may be explored. The angles, levels, and slopes of the apparatus may be varied to provide more exciting challenges. Children should develop a feel for the texture of the various pieces of apparatus such as wood, metal, leather, mat, or floor. Emphasis should be placed on working with good body control and connecting one movement to the next smoothly.

THE WHERE: Children may work in their own personal space on the apparatus with themes that do not require traveling, or they may work in general space by traveling. They may work on tasks presented them alone, with a partner, or in small groups. In addition, children may use the space above, below and around the apparatus.

The teacher, by observing the capabilities of the students, may provide tasks in relation to the ability of the class. A few sample tasks simple enough for all to accomplish easily are:

> Move going over objects. Going under. Going around.
>
> Move going on and off objects. Connect landings to rolls.
>
> Make up a pattern going over something, under something, and ending in a balance on something. Repeat this sequence of movement several times until you can do it with perfect control. Hold the balance position very still.

Apparatus activity is an essential part of the movement program. A lack of large apparatus, *while necessary for certain types of work,* should not discourage one from working with apparatus. Tables, chairs, and benches, if stable and in good condition, can provide obstacles to work with alone or in conjunction with small-hand apparatus such as ropes, wands, and hoops. Ropes can be made into interesting shapes on the floor and used to find ways of traveling around and over on different parts of the body. The teacher is limited only by his imagination and creativity.

Additional information in more detail regarding apparatus may be obtained from references listed in the bibliography.

Lead-up Game Skills

THE WHAT: Lead-up games skills are those needed for successful participation in culturally relevant games and sports. They differ from body management and manipulative skills in that they focus on specific techniques. A striking skill may become the overhand serve in tennis or the instep kick in soccer. A handling skill may become the proper way of carrying a football while running. Throwing can become the underhand pitch in softball. Each sport has its own set of specific skills to be learned.

Lead-up games pave the way to participation in sports which develop physical skills—powers and expertness which, in turn, promote social growth and emotional stability.

THE HOW: The teacher must be familiar with the skills of those sports he is to teach and will develop his or her own methods for teaching these skills. However, all sport skills may be analyzed in movement terms as all movement requires space and has the qualities of time, force and flow. An understanding of movement can aid the teacher in helping children become aware of the *how* in learning specific sport skills.

THE WHERE: Team games are space games, and children need to gain a greater awareness of spatial relationships, for example, self to object, to teammate, to opponent, to goals and boundaries. Since games involve movement, these relationships are constantly changing and the child must learn to use sound judgment in adjusting his actions and effort to cope with changing game situations.

Aquatics

THE WHAT: Swimming is a very important component of the elementary school program. Swimming provides a vigorous and beneficial exercise with lasting carry-over values. In addition to its excellence as an exercise, swimming is a survival skill.

THE HOW: The teacher must be certified as well as qualified to teach aquatics. He may develop his or her own methods for teaching aquatic skills. However, movement methodology may be easily applied to teaching aquatics.

THE WHERE: If pools are not a part of the elementary school facilities, school may be able to work out arrangements with commercial pools and private clubs during hours they are not in use. Portable pools may also be used. They are mounted so that they can be moved from school to school. These pools meet all requirements for public health and sanitation and for good instructional techniques.

Evaluation Guidelines

Continuous evaluation (self, teacher, each other) is inherent in this method of teaching.

Teacher observation is a key factor to recognizing the child's progress or lack of progress and understanding or lack of understanding.

Does the child really answer the task as stated?

Is there evidence that the children understand the concepts by demonstrating them through movement?

Can the child remember the task as stated, answer the task as stated, and repeat his answer in the same way?

Can the child verbalize on the movements he has performed or is going to perform?

Can he observe the movements of another child and verbalize?

Is there evidence of quality in the child's movements?

Is there evidence of recall and application of previously covered movement ideas?

Chapter VII

Program for 12 and 13-year-olds

Basic Characteristics, Needs, Interests, and Program Implications

These basic characteristics, needs, and interests represent an average. Consequently, wide variations should be expected and respected. Ages 12-13.

Bodily Growth

Girls

Characteristics

Girls reach their high point of accelerated growth about 12.5 years. Growth greatest in some girls at ages 11 and 12. Girls are usually two years ahead of boys in development of height and weight. A layer of subcutaneous fat forms. Breasts begin to develop and fill out for several years. The hips become broader.

Increase of heart size and volume with some resulting decrease in endurance. Metabolic rate much slower than for boys.

Strength is increasing but girls are not as strong as boys; their muscles remain soft. Greatest increase during ages 12 and 13. Girls maturing early during adolescence are generally physically stronger than girls of the same chronological age who mature later.

Pubic and axillary hair appear. The contours of the skin and the gloss of the hair are signs of young womanhood. Acne plagues many girls, as well as boys, at this age.

During this period many girls begin, and some complete sexual maturity. Menarche occurs on the average of about age 13, with menstrual cycles irregular.

The stomach becomes larger, which is one of the factors resulting in a craving for food.

Girls are more physically mature, with manifestations of sex changes one or two years earlier than boys.

Needs, Interests, and Program Implications

Girls need to be given knowledge of the physical changes they are undergoing. The unevenness of a girl's growth and development raises questions in her mind as to her "normalcy"; the individual needs to be reassured that the changes and reactions taking place are normal. Daily activity periods are needed with instructions in athletics skills and body mechanics. Girls should be introduced to a broad and diversified program of activities to help them develop proper physical fitness.

Activities should be selected and adjusted, based on the limited physical ability of girls. Teachers should be on the alert for signs of fatigue. Although extreme development of muscles is not desirable for girls, there is a definite need for physical fitness and sufficient strength so that they will be able to participate successfully in certain activities. Modern dance, swimming, and selected team games will help build strength, as well as develop grace and coordination.

Health instruction needs to be offered for girls at this period to explain the growth development and function of the body. Adequate sex information should also be provided.

Overweight girls, and often others, become intrigued by reducing diets. They should be cautioned about the dangers involved unless they are medically prescribed.

Boys

Characteristics

More rapid growth than thas taken place in the last few years. During the latter part of this period, they may gain as much as four or five inches in height and 12 to 14 pounds in weight. Growth of extremities—arms and legs. Shoulders broaden, hips remain narrow, feet enlarge. Coordination and balance in boys show little improvement during the period of rapid physical growth. Increase in heart size and volume, thus often reducing endurance. Heart and arteries may be out of proportion. Muscular growth is very rapid. Post-pubescent boys of same chronological age stronger than pubsecent boys. Boys harder and more muscular than girls. Awkward, due to rapid muscular and skeletal growth.

Pubic hair begins to appear, a light fuzz begins to appear on the upper lip. The skin coarsens and becomes oily.

Sex organs increase in size, occurences of seminal emissions. Some boys have breast enlargement and are broader in the hips due to subnormal pituitary gland action.

The stomach becomes larger, which may be one of the contributing factors to a ravenous but erratic appetite. Voice cracks as rapid lengthening of vocal cords make voice lower and more masculine.

Boys need to be given knowledge of the physical changes they are undergoing. They need to understand that these changes and their reaction to them are normal. Daily activity periods are needed with instruction in body mechanics and skills. A broad and diversified program should be presented to assist well-rounded development of the body. Encouragement and understanding should be given to boys whose performance is poor due to growth imbalance. Teachers should be on the alert for signs of fatigue in their pupils. Activities should be selected and adjusted, based on the physical ability and maturity of the boys.

Due to muscular differences and other factors, competition in strenuous activities between boys and girls should be eliminated. Strenuous activity is needed for muscular development. Careful consideration for individual differences and needs must be made for boys with varying amounts of strength.

Individual guidance for boys who may seem typical is a responsibility and an opportunity for the physical education instructor to help boys who are in his classes.

Psychomotor Development

Girls

Characteristics

During this period some girls may be more skilled than boys are in motor activities. They are usually taller and heavier. Girls are able to compete successfully in their own sports program.

Girls have an interest in boys which creates a desire to participate in coeducational activities. Boys at this level do not generally show as much interest.

Needs, Interests, and Program Implications

A variety of activities should be offered to girls at this level. Team sports, individual and couple, gymnastics, aquatics, and track and field should complete the program. Dance activities should be offered to help girls become more graceful and to improve their coordination. The inclusion of the latest dance steps will help to keep the interest high. Modern dance should also have a place in the curriculum at this level.

Because there is a broad range in the interests and abilities of lower secondary school girls, attention should be given to the individual differences and the need for equating teams or groups in competing activities. Provision should be made for progression in the teaching of activities, as well as the evaluation of results during, and at the conclusion of, the activity unit.

Boys

Characteristics

During this period growth is usually rapid and uneven. Often the body framework and the muscular development are out of proportion to the growth rate. It is also a time when boys are especially self-conscious, restless, and moody. Any one or a combination of the above factors may result in awkwardness for some boys.

Reaction time is steadily improving. Boys are anxious to excel in athletics. Improvement in motor learning and achievement in skills help give them social acceptance and security.

Needs, Interests, and Program Implications

There is a need to offer activities which demand more complex skills than those which have been taught in elementary school. Boys are particularly interested in and willing to practice developing proficiency in motor skills. They should be given a variety of activities, games and sports, and encouraged to try different positions in each sport. Time should be provided in the program for some skill development.

Team sports, individual and couple, dance, gymnastics, aquatics, and track and field are desirable at this level. They not only help motor development, but, in addition, take advantage of the existing interest in competition and the resulting willingness to cooperate and work for the good of the team or group.

There is a need on the part of the teacher to recognize individual differences in motor abilities at this level in order to equate teams and provide special help for boys whose skills are inferior to those of the majority of boys in the class.

Affective Development

Girls

Characteristics

One of the major concerns of girls during this period is their appearance; while some mature early, others are late in maturing. Each girl has her own problems which tend to confuse and worry her regarding her place in society and what others think of her.

Insecurity and instability are common during this period; girls worry when they deviate from the so-called "norm," either in behavior or appearance. They attempt to cover up deviations in their physical appearance by changes in dress, shoes, and make-up. Girls are disturbed by menstrual irregularity. They are self-conscious about their figures, some seeking to hide their development by slouching, while others try to show off their figures. They embarrass easily, and blushing is a common reaction.

Conversations consist of small talk, giggling, and other incidentals. There is a tendency among girls of this age to exaggerate, to be disrespectful, and to show poor manners. Many cannot resist occasional dramatic outbursts, and almost all seem to follow fads in dress. The use of slang expressions is prevalent. They adopt these behavioral characteristics in an effort to assert their independence. Their response to censure or correction is often to cry.

They resent too rigid scheduling. They have a desire to explore and try many things. During this period, social approval is a powerful influence on behavior. Girls develop strong loyalties to friends, groups, and clubs. Frequently, they belong to special cliques. They are usually interested in, or believe that they are in love with, a member of the opposite sex.

Girls usually select as their models movie actresses, airline stewardesses, television starlets, nurses, and teachers who fulfill their conception of femininity—grace, charm, and beauty.

Participation in sports for girls is usually on a non-competitive, social basis.

Parents are not esteemed as highly during this period as earlier. Girls are often very quiet. They like to tease and their humor tends toward sarcasm. They are more mature socially than boys and like to belong to a clique.

Needs, Interests, and Program Implications

At this age girls are in need of guidance and frequently look to the physical education teacher for counseling. The general situation in which the physical education program is conducted presents many opportunities to discuss problems with and answer questions of the young adolescent.

A body mechanics course for girls at this level will help them develop grace and beauty in movement, learn proper exercise for developing better figures, and receive suggestions on makeup, dress and manners.

Team sports, group games, and other club activities will help to meet the need that girls have for loyalty to teammates, friends, and groups. These activities will also provide opportunities for developing cooperation.

Other factors which should be stressed during the physical education period include good sportsmanship, teamplay, honesty, leadership, and the ability to follow.

A strong extraclass program of games, sports, and dance should be offered. Homogeneous grouping and individualized instruction should be used. Those who have poor skills should be given special instruction.

A number of coeducational activities should be offered, including dance, coed volleyball, badminton, and tennis. Modern dance should be included to help girls develop grace of movement and good coordination. After learning the basic techniques, they should be given an opportunity to create their own composition.

Boys

Characteristics

Because of rapid body changes, there is often frustration and confusion connected with "growing up" and boys are often at a loss to know their "real self"; in other words, they are particularly concerned about themselves as others think of them. Boys are disturbed about their enlarging sex organs, nocturnal emissions, and other changes during pubescence and puberty.

The young adolescent is sensitive to fears and anxieties of others, easily embarrassed, and he worries when he seems to deviate from the "norm" in behavior or appearance.

In the early part of this period, boys reject the opposite sex. They are more interested in other boys and in developing height and strength, which to them are the foremost masculine attributes.

Hero worship is characteristic of this age, with boys usually selecting their models from the sports world. A boy who is not especially interested in sports may choose as his hero a flyer, scientist, astronaut, or one in the vocation the boy may wish to enter.

Loyalties to friends, groups, teams, and gangs are particularly strong. The best performer is usually the leader of the team or group. The desire for competitive athletics is high.

The rejection of adults, particularly parents, is most intense during early adolescence. Boys are often more eager to turn to a teacher who likes and believes in them than they are to their own parents.

They have little tolerance for the less skillful. They have a desire to explore and try many things, but not always to finish them. Resent too rigid scheduling. Desire to tease. They often have short explosive outbursts of temper.

Needs, Interests and Program Implications

Boys of this age are in need of guidance and often turn to the physical education teacher—or "coach," as he is usually called—for this assistance. He has the opportunity to counsel and guide boys during this complex developmental period. The "coach" is often a hero in the eyes of his students or players and has an obligation, therefore, to present himself as a good example for students to follow.

Some coeducational activities should be included in the regular physical education program—dance, coed volleyball, badminton, tennis—to help boys feel more at ease when they are with the opposite sex.

Team games, sport skills, and other club activities will help meet the need that boys have for loyalty to teammates, friends, and groups. These activities also provide opportunities for developing cooperation through competition. Other factors that should be stressed during the physical education period include sportsmanship, teamplay, honesty, leadership, and the ability to follow. Patient, tolerant, but firm supervision is recommended.

A well-rounded program should be offered which meets the needs and abilities of low-skilled boys, as well as those who are highly skilled. Their needs may be met through homogeneous grouping and individualized instruction in regular classes and through intramurals and interscholastics in the extraclass program. Those with poor motor skills should be given extra help.

Cognitive Development

Girls and Boys

Characteristics

There is evidence of a steady increase in the ability to reason and solve problems. Motivation for intellectual development frequently lies in the usefulness of specific learning, although boys and girls are similar in general mental abilities. Boys are more adept in technical areas, while girls are slightly more proficient in language skills. On the whole, the majority in this age group are not interested in becoming scholars. They are restless, self-centered, and allow emotional involvement to interfere with reasoning. They show evidence of critical thinking and are inclined to try to solve their own problems.

The physiological changes occurring within adolescents make extended periods of concentration difficult. There is evidence of an increase in imaginative powers. Much of their energy is expended in fantasies. Boys and girls who mature early often have higher achievement than those who mature at a later chronological age.

Needs, Interests, and Program Implications

The curriculum should relate to personal concerns of the pupils. This is a very fine time to teach some biology, anatomy and physiology, and health education, so that boys and girls may learn to understand themselves.

This age group can be motivated and will become enthusiastic about an active curriculum that relates subject matter to their particular problems and interests.

Some historical information about games, dances, sports, and other physical education activities should be presented to pupils of this age. Included also in this presentation should be found facts concerning terminologies, fundamentals, and rules for each activity and strategy.

The physical education teacher, because of the informal atmosphere of the laboratory, usually knows his students better than do other teachers. Therefore, he inspires their trust and confidence. The physical educator has the opportunity to help boys and girls make wise choices, maintain a proper perspective toward life, and keep an appropriate balance between athletic activities and academic courses.

Physical Education for 12 and 13-year-olds

Teaching Philosophy

The lower secondary school instructional program should be a required program. The program at this level should provide review and application of all basic movement skills. In addition, it should be comprehensive enough to expose pupils to a broad and diversified program of activities in all physical education instructional areas. These well-planned experiences should be geared to meet the divergent developmental needs of all pupils—the gifted, the average, the slow learner, the mentally retarded, and the physically handicapped.

The program should provide opportunities for pupils to acquire the skills, knowledges, and attitudes necessary for successful participation in a variety of activities. As a result of such experiences, pupils should be able to select those activities they enjoy the most and experience the greatest success in when they have leisure time—and later in the secondary school.

Coeducational activities should be included in the regular class program as well as in the extraclass program. It is important that boys and girls enjoy wholesome boy-girl relationships in activities and appreciate the skills and interests of the opposite sex.

All pupils should be offered voluntary enriched experiences in the extraclass component of the program.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but rather as models for local towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in aquatic experiences equal to achievement standards or established local norms appropriate for 13-year-olds as measured by the American Red Cross Test.

Example 1.1: After having completed the program for 12 and 13-year-olds, the pupil will develop a level of competency so that, when required to demonstrate the 25-yard flutter kick with kickboard, he will execute the task with proficiency.

Goal 2: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of physical fitness equal to norms appropriate for 13-year-olds as measured by the AAHPER Youth Fitness Test.

Example 2.1: Upon completion of the program for 12 and 13-year-olds, the pupil will develop a level of fitness so that, when required to take the AAHPER Youth Fitness Test, he will pass the six-item battery.

Goal 3: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in dance skills equal to achievement standards appropriate for 13-year-olds as measured by teachers' behavioral rating scales.

Example 3.1: At the completion of the program for 12 and 13-year-olds the pupil will develop a level of competency so that, when required to demonstrate a square dance, he will display basic figures with proficiency.

Goal 4: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in gymnastics and tumbling skills equal to achievement standards appropriate for 13-year-olds as measured by teachers' behavioral rating scales.

Example 4.1: Upon completion of the program for 12 and 13-year-olds, the pupil will develop a level of competency so that, when required to demonstrate the straddle vault, he will execute the task with proficiency.

Goal 5: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in individual and dual activities equal to norms or other achievement standards appropriate for 13-year-olds as measured by such tests as Lockhart-McPherson Badminton Wall Volley Test, Dyer Wallboard Test, Vanderhoof Golf Test, and other appropriate tests and rating scales.

Example 5.1: After having completed the program for 12 and 13-year-olds, the pupil will develop a level of competency so that, when required to demonstrate a tennis serve, he will execute one out of two serves with proficiency.

Goal 6: The pupils in Connecticut completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in team sports equal to norms or other achievement standards appropriate for 13-year-olds as measured by such team sport tests as Johnson Basketball Test (boys), Young-Moser Basketball Test (girls), Warner Test of Soccer Skills, and other appropriate tests.

Example 6.1: At the completion of the program for 12 and 13-year-olds, the pupil will develop a level of competency so that, when required to demonstrate the bunt in softball, the pupil will execute two out of six bunt attempts successfully.

Goal 7: The pupils completing the program for 12 and 13-year-olds will demonstrate degrees of proficiency in track and field activities equal to norms or other achievement standards appropriate for 13-year-olds as measured by appropriate track and field tests.

Example 7.1: Upon completion of the program for 12 and 13-year-olds, the pupil will develop a level of competency so that, when required to demonstrate the visual method of baton transfer, he will execute the transfer with proficiency.

Goal 8: The pupils completing the program for 12 and 13-year-olds will demonstrate cognitive achievement equal to norms or other achievement standards appropriate for 13-year-olds as measured by knowledge tests.

Example 8.1: Upon completion of the program for 12 and 13-year-olds, the pupil will develop a level of competency in cognitive skills so that, when required to take a volley-ball knowledge test, he will answer at least 16 out of 20 questions correctly.

Goal 9: The pupils completing the program for 12 and 13-year-olds will demonstrate *affective achievement* in physical education appropriate for 13-year-olds as measured by teachers' behavioral rating scales and other observational techniques.

Example 9.1: At the completion of the program for 12 and 13-year-olds, the pupil will acquire a positive perception of self and others as demonstrated by his overt and *covert* behavior.

Desirable Experiences

Aquatics: Pupils should be exposed to a broad and varied program of aquatic experiences.

Aquatic Experiences: Swimming fundamentals, water safety, diving, water games, water stunts, synchronized swimming (G), and junior life saving.

Boys and girls should participate together and separately in the program. Instruction in the fundamental skills of aquatics and water safety should be stressed. If school swimming facilities are nonexistent, school authorities may be able to work out an arrangement to use community facilities when they are available.

Body Conditioning: The habit of adequate and regular exercise during the formative years is very important to physical fitness. Consequently, teachers should provide pupils with opportunities to develop and maintain a high degree of physical fitness. The teacher should identify the physically unfit pupil and work with him to improve his physical capacity. Vigorous activity should be provided everyday for all pupils. Valid fitness tests should be used to determine pupil's physical abilities, and evaluate their progress. Teachers should seek new and different methods to motivate pupils in this area of the curriculum.

Body Conditioning Experiences: Weight training (B), jogging, rope jumping, developmental exercises, circuit training, interval swimming, figure control (G), and improvement of body mechanics.

Dance: Fundamental skills in dance should be developed and used in recreational settings, for leisure time and relaxation. Opportunities for co-educational and co-recreational dance experiences should be provided. Current popular dance steps should be included in the unit as they develop.

Dance Experiences: Fundamental rhythms, folk dance, square dance, modern dance, jazz dance, ballet, and social dance.

Gymnastics and Tumbling: Emphasis should be placed on fundamental skills. Pupils should learn to be "cautiously" courageous. They should learn the dangers involved in certain activities, and proceed to overcome these dangers through progressive mastery of skills. Safety in relation to the activity and use of the apparatus should be stressed.

Gymnastic and Tumbling Experiences: Stunts and tumbling, floor exercises, pyramids, trampoline, vaulting, ropes (B), still rings (B), side horse support exercises (B), parallel bars (B), uneven parallel bars (G), balance beam.

Individual and Dual Activities: Boys and girls should participate together and separately. Emphasis should be placed on the development of basic skills for the activity and experiencing the sport as a whole. The activity units should be of brief duration with emphasis on covering many varied activities.

Individual and Dual Experiences: Archery, badminton, bowling, modified golf, handball, paddle ball, skiing, ice skating, roller skating, tennis, paddle tennis, table tennis, wrestling (B), fencing, deck tennis, fly and bait casting, shuffleboard, squash rackets, horseshoe pitching, canoeing.

Team Sports: Pupils should be exposed to a broad and varied program of team sports. Emphasis should be placed on the development and refinement of basic skills, playing the game and experiencing the sport as a whole, and experiencing play at all positions. Development of team loyalty and teamplay is a very important aspect of the program.

Team Sport Experiences: Basketball, field hockey (G), ice hockey (B), soccer, speedball, speed-a-way, softball, volleyball, touch or flag football.

Track and Field: Emphasis should be placed on the development of basic skills in track and field. Opportunities should be provided for pupils to learn about equipment, safety, and etiquette in track and field.

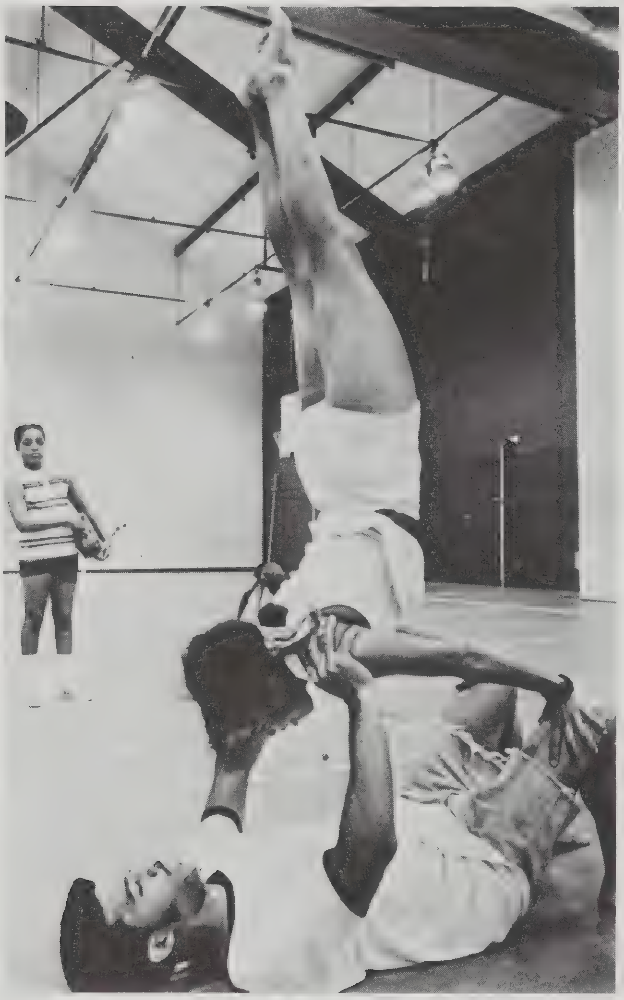
Track and Field Experiences: Dashes, relays, the long jump, high jump hurdles, basketball and softball throw (G), middle-distance running, distance running, cross-country running, triple jump, pole vault (B), shot putt (B), discus throw (B).

Code: (G) Girls only (B) Boys only

Note: Media materials should be used to expose pupils to those physical education experiences in which active participation is not feasible. Media materials should also be used as an aid when teaching those experiences in which active participation is feasible.

Chapter VIII

- **Program for 14 and 15-year-olds**
- **Basic Characteristics, Needs, Interests, and Program Implications**



These basic characteristics, needs and interests represent an average. Consequently, wide variations should be expected and respected. Ages 14-15.

Bodily Growth

Girls

Characteristics

Growth and height tends to peak during this period. Some girls reach adult height at about age 14, while others may not for several years. Breasts continue to develop and fill out and the hips continue to broaden. There is a continued increase of heart size and volume. Metabolic rate still much slower than for boys.

Strength continues to increase, but girls are still not as strong as boys; their muscles remain soft. Girls maturing early during adolescence are generally physically stronger than girls of the same chronological age who mature later. Pubic and axillary hair continues to appear. Acne continues to plague many girls, as well as boys, at this age.

Prior to this period the majority of girls have begun, and over a third have completed, sexual maturity. Some menstrual cycles remain irregular. By the end of the lower and middle secondary school periods, practically all girls reach sexual maturity. The enlargement of the stomach continues. Many girls are reaching their adult height. Coordination is improving. Face and body attain adult contours. Girls gain in poise.

Needs, Interests, and Program Implications

Girls need to be given knowledge of the physical changes they are undergoing. The unevenness of a girl's growth and development raises questions in her mind as to her "normalcy"; the individual needs to be reassured that the changes and reactions taking place are normal. Daily activity periods are needed with instructions in athletic skills and body mechanics. Girls should be introduced to a broad and diversified program of activities to help them develop proper physical fitness.

Activities should be selected and adjusted based on the limited physical ability of girls. Teachers should be on the alert for signs of fatigue. Although extreme development of muscles is not desirable for girls, there is a definite need for physical fitness and sufficient strength to be able to participate successfully in certain activities. Modern dance, swimming, and selected team games will help build strength as well as develop grace and coordination.

Health instruction needs to be offered for girls at this period to explain the growth development and function of the body. Adequate sex information should also be provided.

Overweight girls, and often others, become intrigued by reducing diets and should be cautioned about the dangers involved unless they are medically prescribed.

Boys

Characteristics

Boys reach the high point of acceleration in growth during this period. May gain as much as four or five inches in height and 12 to 14 pounds in weight during each year. Growth of extremities—arms and legs. Shoulders continue to broaden, hips remain narrow, feet continue to enlarge. Coordination and balance in boys show more improvement during this period. Continued increase in heart size and volume. Heart and arteries may be out of proportion. Muscular growth is very rapid. Post-pubescent boys of same chronological age are stronger than pubescent boys. Boys harder and more muscular than girls. Boys are less awkward during this period.

Pubic hair continues to appear and, shortly thereafter, axillary (underarm) hair. A light fuzz continues to appear on the upper lip, resulting in the need for shaving. The skin continues to coarsen and become oily, often resulting in acne.

Sex organs continue to increase in size, occurrences of seminal emissions. Some boys have breast enlargement and are broader in the hips due to subnormal pituitary gland action.

The stomach becomes larger, which may be one of the contributing factors to a ravenous but erratic appetite. Voice cracks as rapid lengthening of vocal cords make voice lower and more masculine. Face and body attain adult contours. Boys double their strength. Most boys finally reach girls in physical growth. Posture improves.

Needs, Interests, and Program Implications

Boys need to be given knowledge of the physical changes they are undergoing. They need to understand that these changes and their reaction to them are normal. Daily activity periods are needed with instruction in body mechanics and skills. A broad and diversified program should be presented to assist well-rounded development of the body. Encouragement and understanding should be given to boys whose performance is poor due to growth imbalance. Teachers should be on the alert for signs of fatigue in their pupils. Activities should be selected and adjusted based on physical ability and maturity.

Due to muscular differences and other factors, competition in strenuous activities between boys and girls should be eliminated.

Strenuous activity is needed for muscular development. Careful consideration for individual differences and needs must be made for boys with varying amounts of strength.

Individual guidance for boys who may seem atypical is a responsibility and an opportunity for the physical education instructor to help boys who are in his classes.

Psychomotor Development

Girls

Characteristics

As ages advance, boys improve rapidly in motor skills, while girls improve only slightly and some decline in their motor performance. The decrease in motor ability in girls may be due in part to the lack of coordination between the development of the body's framework and the musculature. A change in the center of gravity may be a contributing factor. The decrease in performance may also be due to a lack of interest and/or motivation.

Girls have an interest in boys which creates a desire to participate in coeducational activities—boys at this level begin to exhibit more interest.

Needs, Interests, and Program Implications

A variety of activities should be offered to girls at this level. They are interested in team or group activities and therefore should be given skill drills, fundamentals, and opportunities to play all positions in different sports. Dance activities should be offered to help girls become more graceful and to improve their coordination. The inclusion of the latest dance steps will help to keep the interest high. Modern dance should also have a place in the curriculum at this level.

Because there is a broad range in the interests and abilities of middle secondary school girls, attention should be given to the individual differences and the need for equating teams or groups in competing activities. Provision should be made for progression in the teaching of activities as well as the evaluation of results during, and at the conclusion of, the activity unit.

Boys

Characteristics

Although boys may reach the high point of accelerated growth, the body framework and muscular development remain out of proportion to the growth rate. Boys continue to be self-conscious, restless, and moody. Reaction time continues to improve. Boys are anxious to excel in athletics. Improvement in motor learning and achievement in skills help give them social acceptance and security.

Needs, Interests and Program Implications

There is a need to offer opportunities for boys to refine or master skills in selected activities. Boys are particularly interested in and willing to practice developing proficiency in motor skills. They should be given a variety of activities, games and sports, and encouraged to try different positions in each sport.

Team sports are desirable at this level. They not only help motor development, but, in addition, take advantage of the existing interest in competition and the resulting willingness to cooperate and work for the good of the team or group.

There is a need on the part of the teacher to recognize individual differences in motor abilities at this level in order to equate teams and provide special help for boys whose skills are inferior to these or the majority of boys in the class.

Tumbling, apparatus, self-testing stunts, and wrestling should be promoted for boys at this level to help them to improve their motor ability and to offer them an opportunity for self-evaluation of their progress. A wide variety of vigorous physical activities and experiences with a wide variety of recreational activities is recommended.

Affective Development

Girls

Characteristics

Girls continue to be more concerned about personal appearance and posture than boys. Some mature early, while others are late in maturing. Each girl has her own problems which tend to confuse and worry her regarding her place in society and what others think of her.

Girls continue to worry when they deviate from the so-called "norm," either in behavior or appearance. They attempt to cover up deviations in their physical appearance by changes in dress, shoes and makeup. Girls are disturbed by menstrual irregularity. They are self-conscious about their figures, some seeking to hide their development by slouching, while others try to show off their figures. They embarrass easily, and blushing is a common reaction.

Conversations tend to become more sophisticated although some small talk, giggling, and other incidentals continue. Almost all seem to follow fads in dress. The use of slang expressions is prevalent. They adopt these behavioral characteristics in an effort to assert their independence.

During this period, social approval is a powerful influence on behavior. Girls develop strong loyalties to friends, groups, and clubs. Frequently, they belong to special cliques. They are usually interested in, or believe that they are in love with, a member of the opposite sex.

Girls usually select as their models movie actresses, airline stewardesses, television starlets, nurses and any of their teachers, who fulfill their conception of femininity, grace, charm, and beauty.

Interest in participating in sports usually peaks, then begins to decline during this period.

They exert increased self-control. Parent-adolescent conflict at its peak. They tend to daydream, decreasing tensions. Try to gain status through social activities. They find group dating popular and are concerned with moral concepts.

Needs, Interests, and Program Implications

At this age, girls are in need of guidance and frequently look to the physical education teacher for counseling. The general situation in which the physical education program is conducted presents many opportunities to discuss problems and answer questions of the young adolescent.

A body mechanics course for girls at this level will help them develop grace and beauty in movement, proper exercise for developing better figures, suggestions on makeup, dress and manners.

Team sports, group games, and other club activities will help meet the need that girls have for loyalty to teammates, friends, and groups. These activities will also provide opportunities for developing cooperation.

Other factors which should be stressed during the physical education period include good sportsmanship, teamplay, honesty, leadership, and the ability to follow.

A strong extraclass program of games, sports, and dance should be offered. Homogeneous grouping and individualized instruction should be used, and those who have poor skills should be given special instruction.

A number of coeducational activities should be offered, including dance, coed volleyball, badminton and tennis. Modern dance should be included to help girls develop grace of movement and good coordination. After learning the basic techniques, they should be given the opportunity to create their own composition.

Boys

Characteristics

At the beginning of this period, body changes still contribute to frustration and confusion. Boys continue to be concerned about themselves and seek group approval. They continue to be disturbed about their enlarging sex organs, nocturnal emissions, and other changes during pubescence and puberty.

The adolescent continues to be sensitive to fears and anxieties of others, is easily embarrased, and worries when he seems to deviate from the "norm" in behavior or appearance.

Later in this period, boys develop an interest in girls. They maintain their interest in other boys and in developing weight, height and strength which to them are the foremost masculine attributes. Hero worship peaks, then begins to decline during this period.

Loyalties to friends, groups, teams, and gangs continue to be strong. The best performer is still usually the leader of the team or group. The desire for competitive athletics increases.

Boys continue to reject adults, particularly their parents during this period. They tend to turn to a teacher who likes and believes in them rather than to their own parents. Express feelings freely. They are usually willing to admit own shortcomings, are more tolerant of the less skillful, and strive for outstanding performance. Intensively emotional and complex. Parent-adolescent conflict at its peak, tend to daydream, decreasing tensions. Gains status through social activities. Group dating popular. Show better control of temper and feelings. Wage-earning begins to be important.

Needs, Interests, and Program Implications

Boys at this age are in need of guidance and often turn to the physical education teacher or "coach," as he is usually called, for this assistance. He has the opportunity to counsel and guide boys during this complex developmental period. The "coach" is often a hero in the eyes of his students or players and has an obligation therefore to present himself as a good example for students to follow.

Some coeducational activities should be included in the regular physical education program—dance, coed volleyball, badminton, tennis—to help boys feel more at ease with the opposite sex.

Team games, sport skills, and other club activities will help meet the need that boys have for loyalty to teammates, friends, and groups. These activities also provide opportunities for developing cooperation through competition.

Other factors that should be stressed during the physical education period include sportsmanship, teamplay, honesty, leadership, and the ability to follow.

Patient, tolerant, but firm supervision is recommended. A well-rounded program should be offered which will meet the needs and abilities of low-skilled boys as well as those who are highly skilled. Their needs may be met through homogeneous grouping and individualized instruction in regular classes and through intramural and interscholastics in the extraclass program. Those with poor motor skills should be given extra help.

Cognitive Development

Boys and Girls

Characteristics

The ability to reason and solve problems continues to increase. Motivation for intellectual development frequently lies in the usefulness of specific learning. Although boys and girls are similar in general mental abilities, boys are more adept in technical areas, while girls are slightly more proficient in language skills. On the whole, we find that the majority of this age group is still restless, self-centered and frequently allows emotional involvement to interfere with reasoning.

Both boys and girls respond poorly to methods of teaching applicable to the 16-18-year-old age group. There is some increase in the ability to concentrate for longer periods of time. There is evidence of an increase in imaginative powers.. Those who mature early often have higher achievement than those who mature at a later chronological age.

Curiosity still exists concerning that what, why, and wherefore of their bodily functions and needs. Continue to show evidence of critical thinking and an inclination to try to solve their own problems.

Needs, Interests, and Program Implications

The curriculum should relate to personal concerns of the pupils. This is a very fine time to teach biology, physiology, anatomy, and health education so that boys and girls may learn to understand themselves.

This age group can be motivated and will become enthusiastic about an active curriculum that relates subject matter to their particular problems and interests. Some historical information about games, dances, sports, and other physical education activities should be presented to pupils of this age. Included also in this presentation should be found facts concerning terminologies, fundamentals, and rules for each activity and strategy. The physical education teacher, because of the informal atmosphere of the laboratory, usually knows his students better than do other teachers. Therefore, he inspires their trust and confidence. The physical educator has an opportunity to help boys and girls make wise choices, maintain a proper perspective toward life, and keep an appropriate balance between athletic activities and academic courses.

Physical Education for 14 and 15-year-olds

Teaching Philosophy

The middle secondary school physical education instructional program should be a required program. Pupils may select activities from within the required program. However, they must select at least one activity from each instructional area.

The middle secondary program should continue to be comprehensive enough to expose pupils to a broad and diversified program of activities in all physical education instructional areas. These well-planned experiences should be geared to meet the divergent developmental needs of all pupils—the gifted, the average, the slow learner, the mentally retarded, and the physically handicapped.

The pupils should be provided with opportunities to develop a greater degree of proficiency, in a variety of skills and to reinforce knowledges, attitudes, and strategies learned at the previous levels. Opportunities should be provided for pupils to select activities wisely from within the required program. They should begin to specialize in activities they enjoy most and experience the greatest success in. Teachers should begin to introduce pupils to lifetime oriented activities at the upper middle secondary level.

Coeducational activities should be included in the regular class program as well as the extra-class program. It is important that boys and girls enjoy wholesome boy-girl relationships in activities. All pupils should be offered voluntary, enriched experiences in the extraclass component of the program.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but rather as models for towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency in aquatic experiences equal to achievement standards or established local norms appropriate for 15-year-olds as measured by the American Red Cross Test.

Example 1.1: At the completion of the program for 14 and 15-year-olds the pupil will increase his level of competency so that, when required to demonstrate the back crawl, he will execute the task with increased proficiency.

Goal 2: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of physical fitness equal to norms appropriate for 15-year-olds as measured by the AAHPER Youth Fitness Test, he will pass the six-item battery.

Example 2.1: After having completed the program for 14 and 15-year-olds, the pupil will increase his level of fitness so that, when required to take the AAHPER Youth Fitness Test, he will pass the six-item battery.

Goal 3: The pupils in Connecticut completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency in dance skills equal to achievement standards appropriate for 15-year-olds, as measured by teachers' behavioral rating scales.

Example 3.1: At the completion of the program for 14 and 15-year-olds, the pupil will increase his level of competency so that, when required to demonstrate the cha-cha, he will display cha-cha dance patterns with increased proficiency.

Goal 4: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency in gymnastics and tumbling skills equal to achievement standards appropriate for 15-year-olds as measured by teachers' behavioral rating scales.

Example 4.1: At the completion of the program for 14 and 15-year-olds, the pupil will increase his level of competency so that, when required to demonstrate the backward hip circle on the horizontal bar, he will execute the task with increased proficiency.

Goal 5: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency in individual and dual activities equal to norms or other achievement standards appropriate for 15-year-olds as measured by such tests as Lockhart-McPherson Badminton Wall Volley Test, Dyer Wallboard Test, Vanderhoof Golf Test and other appropriate tests, and rating scales.

Example 5.1: Upon completion of the program for 14 and 15-year-olds the pupil will increase his level of competency so that, when required to demonstrate the drop shot in badminton, he will execute two out of four shots with increased proficiency.

Goal 6: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency in team sports equal to norms or other achievement standards appropriate for 15-year-olds as measured by such team sport tests as Johnson Basketball Test (boys), Young-Moser Basketball Test (girls), Warner Test of Soccer Skills, and other appropriate tests.

Example 6.1: Upon completion of the program for 14 and 15-year-olds the pupil will increase his level of competency so that when, required to demonstrate the driving lay-up shot, the pupil will execute three out of five attempts with increased proficiency.

Goal 7: The pupils completing the program for 14 and 15-year-olds will demonstrate degrees of proficiency and track and field activities equal to norms or other achievement standards appropriate for 15-year-olds as measured by appropriate track and field tests.

Example 7.1: At the completion of the program for 14 and 15-year-olds, the pupil will increase his level of competency in track and field activities so that, when required to demonstrate the non-visual method of baton transfer, he will execute the transfer with increased proficiency.

Goal 8: The pupils completing the program for 14 and 15-year-olds will demonstrate cognitive achievement equal to norms or other achievement standards appropriate for 15-year-olds as measured by knowledge tests.

Example 8.1: After having completed the program for 14 and 15-year-olds, the pupil will increase his level of competency in cognitive skills so that, when required to take a basketball knowledge test, he will answer at least eight out of 10 questions correctly.

Goal 9: The pupils completing the program for 14 and 15-year-olds will demonstrate affective achievement in physical education appropriate for 15-year-olds as measured by teachers' behavior rating scales and other observational techniques.

Example 9.1: At the completion of the program for 14 and 15-year-olds, the pupil will respond positively toward interaction with his peers during psychomotor activity, as well as in other situations.

Desirable Experiences

Aquatics: Teachers should continue to provide a broad and diversified program of aquatic experiences, with boys and girls participating separately and together. Opportunities should be provided to improve and refine aquatic skills and to reinforce knowledges, attitudes, and techniques learned at the previous levels. If school swimming facilities are nonexistent, school authorities may be able to work out an arrangement to use community facilities when they are available.

Aquatic Experiences: Intermediate swimming, water safety, diving, water games, water stunts, synchronized swimming (G), and life-saving.

Body Conditioning: The teacher should continue to provide pupils with opportunities to maintain or increase their level of physical fitness. The teacher should identify the physically unfit pupil and work with him to improve his physical capacity. Vigorous activity should be provided everyday for all pupils. Valid fitness tests should be used to determine pupils' physical abilities to evaluate their progress. Teachers should seek new and different methods to motivate pupils in this area of the curriculum.

Body Conditioning Experiences: Weight training (B), jogging, rope jumping, developmental exercises, circuit training, interval swimming, rhythmical exercise, figure control (G), and improvement of body mechanics.

Dance: Opportunities should be provided to improve and refine dance and other rhythmical skills learned at previous levels. Reinforcement of knowledges, attitudes, and techniques should be a vital part of the unit. Opportunities for co-educational and co-recreational dance experiences should be provided. Current popular dance steps should be included in the unit as they develop.

Dance Experiences: Folk dance, square dance, social dance, jazz dance, ballet and modern dance.

Gymnastics and Tumbling: Emphasis should be placed on the refinement and improvement of gymnastic and tumbling skills, and the acquisition and reinforcement of knowledges, attitudes and techniques. Pupils should continue to be "cautiously" courageous. They should learn the dangers involved in certain activities and should proceed to overcome these dangers through progressive mastery of skills. Safety in relation to the activity and use of the apparatus should be taught.

Gymnastics and Tumbling Experiences: Stunts and tumbling, floor exercises, pyramids, trampoline, vaulting, ropes (B), still rings (B), sidehorse support exercises (B), parallel bars, uneven parallel bars (G), balance beam (G).

Individual and Dual Activities: Emphasis should be placed on the improvement and refinement of individual and dual skills, and the acquisition and reinforcement of knowledges, attitudes, and techniques. The beginning of specialization in the selection of individual and dual activities should occur at this level. Pupils should develop a deeper understanding of and an appreciation for various sports as a participant and as a spectator.

Individual and Dual Experiences: Archery, badminton, bowling, modified golf, handball, paddle ball skiing, ice skating, roller skating, tennis, paddle tennis, table tennis, wrestling (B), fencing, deck tennis, fly and bait casting, shuffleboard, squash rackets, horseshoe pitching, canoeing.

Team Sports: Emphasis should be placed on developing and refining intermediate or advanced skills and reinforcing knowledge, attitudes, and techniques. Specialization in the selection of team sports should be a part of this program. Pupils should learn to develop and apply the appropriate strategy to game situations. They should also develop a better understanding and appreciation for team activities as a participant and as a spectator.

Team Sport Experiences: Basketball, field hockey (G), ice hockey (B), soccer, speedball, speed-a-way, softball, volleyball, touch or flag football (B).

Track and Field: Specialization in the selection of track and field activities should be a vital part of this program. Emphasis should be placed on developing a higher degree of proficiency in the selected activities and on the acquisition and reinforcement of knowledges, attitudes, and techniques. Pupils should develop an understanding and appreciation for track and field experiences as a participant and as a spectator.

Track and Field Experiences: Dashes, relay, long jump, high jump, basketball and softball throw (G), middle-distance running, distance running, cross-country running (B), running broad jump, triple jump, pole vault (B), shot putt, discus throw, javelin throw.

Code: (G) Girls only (B) Boys only

Note: Media materials should be used to expose pupils to those physical education experiences in which active participation is not feasible. Media materials should also be used as an aid when teaching those experiences in which active participation is feasible.

Chapter IX

• Physical Education for 16, 17, and 18-year-olds

• Basic Characteristics, Needs, Interests, and Program Implications

These basic characteristics, needs, and interests represent an average. Consequently, wide variations should be expected and respected. Ages 16-18.

Bodily Growth

Girls

Characteristics

Practically all girls have attained their maximum growth and height, and there may be a slight increase in weight. The heart has reached its maximum size; blood pressure may drop slightly. Although sexual maturity has been reached by this period, the menstrual cycle may be irregular with some girls.

There is less craving for food—appetites are curbed usually because of fear of overweight. Slight blemishes of skin may still be of concern to some. Girls are anxious to develop charm, grace, and beauty. They therefore are concerned about their figures, the size of their feet, hair and skin condition.

Needs, Interests, and Program Implications

Daily activity should be a requirement for girls of this age to help them maintain and improve their physical fitness. Great care must be taken in the selection, promotion, and teaching of activities to develop and maintain the interest of girls at this age period.

A course is needed in body mechanics in which girls are taught to walk properly, act more gracefully, and use their bodies more efficiently in daily living. The course may have a different name—"Charm Class" or "Figure Analysis and Control," for instance. Girls need to be cautioned against the dangers of dieting, except under medical supervision.

Individual and couple activities, such as swimming, diving, tennis and dance, will help girls to enjoy, as well as to profit from, their participation.

Boys

Characteristics

Boys attain or come close to attaining their maximum growth. Some reach adult height at the age of 16, while others continue their growth to ages 19 or 20. Bone growth is usually completed with sexual maturity. Boys may continue to gain weight. Heart increases to maximum size; blood pressure rises slightly. Muscles become hard and firm. Strength usually doubles from ages 13 to 17. At each level, the strongest boy is usually three times as strong as the weakest boy. Awkwardness diminishes with an improvement in coordination.

The puberty cycle is completed in the majority of cases. Secondary sex characteristics have completed their development. Voice changes are practically finished by this time. There may be a period of glandular instability with variations in energy levels resulting in skin blemishes. Continued craving for food with appetites increasing.

Needs, Interests, and Program Implications

Daily physical activity periods are needed to help in the development of good physical fitness. Expanded opportunities for participation in many types of physical education activities should be offered. Activities demanding increased endurance may be offered, but teachers should watch for excessive participation. Proper warmup and training procedures should be followed prior to strenuous activities.

Interest increases in the development of strength. Weight training programs help to meet this need, as do activities such as apparatus, tumbling, and wrestling. Consideration should be given to differing amounts of individual strength.

Opportunities for the discussion of personal and community health problems should be provided for boys during this period.

While appetites are large, the tendency to eat unbalanced meals may become a problem. Eating an inadequate breakfast, or none at all, should be discouraged.

Psychomotor Development

Girls

Characteristics

While some will show an interest and improvement in motor skills, many girls will have to be urged to participate. Girls are interested in their figures, weight and height, the size of their feet, smooth skin, and other physical attributes which make them attractive to boys.

The majority of girls have reached their maximum growth, and it is therefore important for them to develop coordination, alignment, and control of their bodies.

Needs, Interests, and Program Implications

At the beginning of this level, certain team sports may be offered, such as field hockey, basketball, volleyball, and softball. Some girls will be interested in continuing these activities through high school while others will become disinterested. There is a need to offer many individual and couple activities to girls—such as golf, tennis, badminton, and archery—to help in the development of coordination, grace, beauty of movement, and all-around physical fitness. Activities of this nature will have post-high school value. Coeducational activities should be a part of the program.

Boys

Characteristics

There is improvement in motor coordination and in motor skills with most boys of this age. They are concerned with size and stamina and therefore frequently test themselves to see how they measure up to their own standards and to those of their peers. Boys who seem to "fail" measuring up to so-called standards tend to withdraw or become introverted. They may compensate by exaggerated boasting of their imagined physical feats. Frequently, the lack of adequate motor skills may be the cause of social rejection and result in participation in unacceptable social practices, even actual delinquency.

During this period many boys have a desire to excel in one or more activities. They are willing to go all out to achieve success. Some are interested in team sports, while others wish to excel in individual or couple activities.

Needs, Interests, and Program Implications

A well-rounded program of activities needs to be offered to boys at this level. It is important to encourage them to become skilled in team sports. It is far more important that they be able to develop sufficient skills and interest in individual and/or couple activities which will have post-high school value.

To assist some boys in developing motor skills, it may be necessary to help them increase their strength. Classes in weight training should be offered, not just for those who wish to become better athletes, but primarily for those who need to build up sufficient strength in order that they may participate successfully in athletics and gain self-assurance with peers.

Opportunities should be given to those gifted with good motor development to further improve through a strong program of interscholastic athletics. Such a program should be balanced with an equally strong program of intramurals for those less gifted who desire to participate.

Affective Development

Girls

Characteristics

Most girls in the later adolescent period are concerned with their physical appearance and whether they measure up to the basic criterion by which our society judges the female. Assets such as a well-proportioned figure, attractive hands and feet, a good complexion, and good teeth are important to adjustment.

As underclass students, they experiment with make-up, exaggerated hairdos, and fads in dress to divert attention from what they consider to be shortcomings in their features and figures. They often join fan clubs and idolize youthful stars. As they mature, they accept their feminine role. Many are interested in such positions as nursing, teaching, or social work where they may be of service to humanity. At the same time, others dream of a more glamorous occupation such as movie actress, airline stewardess, or model.

Girls are usually more tolerant of their parents and adults at this age. If they have been allowed to grow without undue restraint, they generally assume adult roles and are comfortable with their parents and other adults.

Girls make the adjustment to heterosexuality earlier than boys. During senior high school years, social prejudices and antagonisms increase. Although conformity to the social mores of the school is important, some young adults are willing to stand up as individuals against the majority. Conflict between the ideal versus the real often causes social and emotional problems for young adults.

Needs, Interests, and Program Implications

Physical education teachers need to be particularly well-informed about the characteristics of girls at this level. They have a fine opportunity to give guidance and counsel in a somewhat informal atmosphere. They are often closer to girls than parents and, therefore, have a great responsibility in meeting the challenge.

A body mechanics program should be established for girls who need corrective work in posture, motor development, and skill improvement. Although team sports may be carried on during this period, it is advisable to encourage an interest in lifetime sports. Adequate motor skills should be developed to insure enjoyment in participation. These activities should include golf, tennis, archery, badminton, swimming, diving, and bowling.

All types of dancing—in particular, modern dance—should be stressed in the program to help develop coordination and grace of movement in order that girls be more poised in social situations. Some co-educational activities should be offered to high school students. Care must be taken in selection and conduct of activities to assure promotion of, rather than detraction from, the objectives being sought.

Intramural as well as interscholastic activities should be available. Care should be taken in planning and conducting these events in accordance with recommended rules and practices.

Boys

Characteristics

High school boys are concerned with their physical adequacy and tend to compensate for inadequacy by exaggerated behavior, excessive physical activity, or by withdrawing from reality. Some boys are concerned about the size and adequacy of their sex organs—whether they might be considered inferior to an adult man's potential.

Interest in, and affection toward, the opposite sex is prominent in late adolescence. The change from homosexual to heterosexual adjustment is usually completed during the high school period.

Groups of older boys are more democratic than younger groups. Outgoing youth are best liked while those that are withdrawn are ignored. Friendships develop around a similarity of interests.

While communication is necessary to the adolescent, often he fails to express himself well. Parents are frequently left out of the picture because of their failure to understand and appreciate the problems of their teenage sons. Boys seek independence. Conflict between the need for independence versus the need for security may lead to emotional disorders.

Money is a major concern of the average high school boy. Lack of money and/or maladjustment in financial matters may be serious factors in a boy's failure to be accepted by members of the group. The need for money for out-of-school activities, such as dating and gas for the car, may be so great that it means giving up participation in intramurals and interscholastic sports to take a part-time job.

Conformity to the social structure of the school—the high school set and fads—is important to the young adult regardless of his own real feelings. As a result of the various pressures during this period, prejudices and antagonisms may increase.

Needs, Interests, and Program Implications

The physical education program must be sufficiently broad, varied, and interesting so that high school boys maintain their enthusiasm and at the same time meet objectives which have been established for the program. While it is important to continue team sports which have been taught during the lower secondary period, it is necessary to present more lifetime activities which may be carried on out of school and after graduation. A well-rounded physical education program provides a fine medium for the development of many social and emotional characteristics, such as leadership, honesty, and good sportsmanship.

Because of their close relationship to boys, physical education instructors must also serve as guidance counselors, even though they may not carry the title officially.

Some coeducational activities should be offered to high school students. Care must be taken to select activities and conduct them in a manner that will promote rather than detract from social objectives being sought.

Intramurals should be offered to boys who are not on varsity squads. Teams should be chosen in a manner to help equalize competition and maintain interest. Sports can be utilized effectively to minimize prejudices and antagonisms and to build school spirit.

Cognitive Development

Boys and Girls

Characteristics

There is little, if any, increase in mental power and acuity between ages 16 and 18. Most youth in this period are more capable of learning abstractions than they were at an earlier age. There is an increase in ability to gain insight into problems and to form generalizations.

The ability to concentrate on school tasks is greater than it was at the lower secondary level. There develops a major concern with the future, going to college, learning a trade, finding a job, or entering military service. Pressures in the form of homework, strict marking, college board examinations, and parental demands create tensions which may affect high school students adversely.

Needs, Interests, and Program Implications

Students at this level need motivation in their course work and in the physical education program as well. Rote learning presents no challenge. The need exists for a fresh and imaginative approach to course work.

New skills and activities which stimulate students to do their own thinking should be presented. Individual and couple activities should be stressed. These present the challenge of continual advancement in learning and offer rich opportunities for post-high school recreation.

With added pressures of college entrance examinations, plus academic and parental demands, the administration needs to maintain balance in the total school curriculum. This balance may be effected by continuing to provide for a strong physical education program which will help build and maintain physical fitness, provide for the release of tensions, and develop worthwhile recreative and athletic skills.

Physical Education for 16, 17, and 18-year-olds

Teaching Philosophy

The upper secondary school physical education program should be a required program. However, pupils may now select activities from within the required program and specialize in those of their own choosing. The program should consist of lifetime oriented activities as well as a balanced offering of experiences from all physical education instructional areas.

These well-planned experiences should be geared to meet the divergent developmental needs of all pupils—the gifted, the average, the slow learner, the mentally retarded, and the physically handicapped.

Pupils should be provided opportunities to develop an even greater degree of proficiency and mastery in the selected activities. In-depth knowledge and strategy related to selected activities should be taught.

Opportunities should be provided for more coeducational and corecreational experiences at this level. Students should be encouraged to participate in the planning and implementation of the program.

By the end of this period, students should have had an opportunity to acquire knowledges, skills, and attitudes that permit them to perform on an advanced level in several instructional areas. Such a success oriented program with emphasis on lifetime sports should provide satisfying and successful experiences in physical education, thereby developing in individuals a desire to participate regularly in physical activities throughout life.

Coeducational activities should be included in the regular class program as well as in the extraclass program. It is important that boys and girls enjoy wholesome boy-girl relationships in activities and appreciate the skills and interests of the opposite sex.

All pupils should be offered voluntary, enriched experiences in the extraclass component of the program.

Sample Behavioral Objectives

These behavioral objectives are not intended as state objectives but as models for towns to utilize in writing behavioral objectives.

Goal 1: The pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in aquatic experiences equal to achievement standards or established local norms appropriate for 17-year-olds as measured by the American Red Cross.

Example 1.1: At the completion of the program for 16, 17, and 18-year-olds, the pupil will naturalize and refine his aquatic skills so that, when required to demonstrate the breaststroke, he will execute the task with a high degree of proficiency.

Goal 2: The pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of physical fitness equal to norms appropriate for 17-year-olds as measured by the AAHPER Youth Fitness Test. And he will pass the six-item battery.

Example 2.1: Upon completion of the program for 16, 17, and 18-year-olds, the pupil will further increase his level of fitness so that, when required to take the AAHPER Youth Fitness Test, he will pass the six-item battery.

Goal 3: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in dance skills equal to achievement standards appropriate for 17-year-olds as measured by teachers' behavioral rating scales.

Example 3.1: After having completed the program for 16, 17, and 18-year-olds the pupil will naturalize and refine his dance skills so that, when required to demonstrate the waltz, he will display waltz steps with a high degree of proficiency.

Goal 4: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in gymnastics and tumbling skills equal to achievement standards appropriate for 17-year-olds as measured by teachers' behavioral rating scales.

Example 4.1: At the completion of the program for 16, 17, and 18-year-olds, the pupil will naturalize and refine selected gymnastic skills so that when required to demonstrate a front support, half circle left with left leg on the side horse, he will execute the task with a high degree of proficiency.

Goal 5: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in individual and dual activities equal to norms or other achievement standards appropriate for 17-year-olds as measured by such tests as Lockhart-McPherson Badminton Wall Volley Test, Dyer Wallboard Test, Vanderhoof Golf Test, and other appropriate tests and rating scales.

Example 5.1: Upon completion of the program for 16, 17, and 18-year-olds, the pupil will naturalize and refine his archery skills so that, when required to demonstrate the point-of-aim method, the pupil will execute the task with a high degree of proficiency.

Goal 6: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in team sports equal to norms or other achievement standards appropriate for 17-year-olds as measured by such team sport tests as Johnson Basketball Test (boys), Young-Moser Basketball Test (girls), Warner Test of Soccer Skills, and other appropriate tests.

Example 6.1: Upon completion of the program for 16, 17, and 18-year-olds, the pupil will naturalize and refine his basketball skills so that, when required to demonstrate the give and go, the pupil (with another player) will execute the task with a high degree of proficiency.

Goal 7: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate degrees of proficiency in track and field activities equal to norms or other achievement standards appropriate for 17-year-olds as measured by appropriate track and field tests.

Example 7.1: At the completion of the program for 16, 17, and 18-year-olds, the pupil will naturalize and refine his track and field skills so that, when required to demonstrate the pole vault, he will execute the vault with a high degree of proficiency.

Goal 8: The pupils completing the program for 16, 17, and 18-year-olds will demonstrate cognitive achievement equal to norms or other achievement standards appropriate for 17-year-olds as measured by knowledge tests.

Example 8.1: At the completion of the program for 16, 17, and 18-year-olds, the pupil will further increase his level of competency in cognitive skills so that, when required to take an archery knowledge test, he will answer at least 16 out of 20 questions correctly.

Goal 9: Pupils completing the program for 16, 17, and 18-year-olds will demonstrate affective achievement in physical education appropriate for 17-year-olds as measured by teachers' behavior rating scales and other observational techniques.

Example 9.1: After having completed the program for 16, 17, and 18-year-olds, the pupil will demonstrate a positive value toward physical education by actively participating in selected lifetime activities as well as in other psychomotor activities.

Desirable Experiences

Aquatics: Teachers should continue to provide a comprehensive program of aquatic experiences with boys and girls participating separately and together. Opportunities should be provided to improve and refine selected aquatic skills and to reinforce knowledges, attitudes, and techniques learned at the previous levels. If school swimming facilities are nonexistent, school authorities may be able to arrange for use of community facilities when they are available.

> *Aquatic Experiences:* Advanced swimming, water safety, diving, water games, water stunts, synchronized swimming (G), and life saving.

Body Conditioning: Fitness is fleeting and transitory; therefore, emphasis should be placed on developing an understanding of the nature and value of fitness so that students will continue to engage in body conditioning throughout their lives. The teacher should identify the physically unfit pupil and work with him to improve his physical capacity. Vigorous activity should be provided every day for all pupils. Valid fitness tests should be used to determine physical abilities and evaluation of progress. Pupils should develop an understanding and appreciation of adequate and regular exercise.

Conditioning Experiences: Weight training (B), jogging, rope jumping, developmental exercises, interval swimming, rhythmical exercises, figure control (G), and improvement of body mechanics. Many sports and games also provide conditioning experiences.

Dance: Emphasis should be placed on improving and refining dance and other rhythmical skills learned at previous levels. Opportunities should be provided for creativity and composition. Reinforcement of knowledges, attitudes, and techniques should be a vital component of the unit. Opportunities for coeducational dance experiences should be provided. Current popular dance steps should be included in the unit as proficiency develops.

Dance Experiences: Folk dance, square dance, social dance, jazz dance, ballet and modern dance.

Gymnastics and Tumbling: Emphasis should be placed on improving and refining selected gymnastic and tumbling skills and the acquisition and reinforcement of knowledges, attitudes, and techniques. Further emphasis should be placed on specializing in complicated body maneuvers. Pupils should learn the dangers involved in certain activities and should proceed to overcome these dangers through progressive mastery of skills. Safety in relation to the activity and use of the apparatus should be taught.

Gymnastic and Tumbling Experiences: Stunts and tumbling, floor exercises, pyramids, trampoline, vaulting, ropes (B), still rings (B), side horse support exercises (B), parallel bars (B), uneven parallel bars (G), balance beam, horizontal bars (B).

Individual and Dual Activities: Emphasis should be placed on improving and refining selected individual and dual skills and the acquisition and reinforcement of knowledges, attitudes, and techniques. Pupils should specialize in lifetime oriented activities of a relatively vigorous and non-vigorous nature. This program should provide students with opportunities to develop more complete techniques and skills in sports for adult life. The program may be organized on a coeducational basis.

Individual and Dual Experiences: Archery, badminton, bowling, modified golf, handball, paddle ball, skiing, ice skating, roller skating, tennis, paddle tennis, table tennis, wrestling (B), fencing, deck tennis, fly and bait casting, shuffleboard, squash rackets, horseshoe pitching, canoeing.

Dual activities help young people acquire athletic skills and attitudes which can prove highly useful in adult sports and recreation. One such activity is fencing, a popular sport since the 16th century.

Team Sports: Pupils should attempt to maximize their proficiency in a selected number of team sports and acquire and reinforce knowledges, attitudes and techniques. Pupils will experience competition in the selected team sport as well as officiate team sport activities.

Team Sport Experiences: Basketball, field hockey (G), ice hockey (B), soccer, speedball, speed-a-way, softball, volleyball, touch or flag football (B).

Track and Field: Pupils should attempt to maximize their proficiency in a selected number of track and field acivities and acquire and reinforce knowledges, attitudes, and techniques. They should continue to develop understandings and appreciations of track and field activities as participants as well as spectators.

Track and Field Experiences: Dashes, relays, the long jump, high jump, hurdles (B), basketball and softball throw, middle-distance running, distance running, cross-country running (B), running broad jump, triple jump, pole vault (B), shot putt, discus throw, javelin throw.

Note: Media materials should be used to expose pupils to those physical education experiences in which active participation is not feasible. Media materials should also be used as an aid when teaching those experiences in which active participation is feasible.

Chapter X

Suggestions and Sources for Effective Planning and Teaching Secondary School Physical Education

Teaching Suggestions

Based on the cognitive, affective, and psychomotor needs of pupils at the secondary school level, a number of general teaching suggestions are offered:

The physical education program should be geared to the developmental needs and interest of all pupils.

Pupils should be exposed to a wide variety of activities that can be used during leisure time.

Encourage pupils to assist in planning, conducting, and officiating class and intramural activities.

Instruction in rules and etiquette should be a part of each unit.

Explanation, demonstration, participation review, continuous evaluation, and rectification should be a part of each activity unit.

Coeducational experiences should be provided on all levels.

Provisions should be made for equating teams for play in classes.

Conditioning activities should be a part of each activity unit.

The results of physical fitness test scores should be utilized in planning programs for individuals and groups.

An opportunity "to play the game" should be provided for each activity unit.

Information should be provided regarding the availability of recreational facilities where activities learned can be used.

Health and safety related to physical activity should be taught as part of each unit.

Many physical education activities in secondary school are applicable to leisuretime enjoyment—skiing, for instance. But instruction in safety and the rules of the game should accompany school participation in these sports.

Short activity units (2-4 weeks) provide pupils with a greater choice and variety of experiences.

Long activity units (8-10 weeks) provide pupils with opportunity for more in-depth knowledge, understanding, and greater skill development.

Some activities may be extended to a second unit for advanced participation for those who are skilled and wish to continue.

Innovative Approaches Used In Teaching Secondary School Physical Education

Independent Study Option: The independent study option is a relatively new concept that allows students an opportunity to choose freely an activity area and the chance to rely completely on one's sense of responsibility to carry out an established goal.

Self-Directed Learning: The self-directed learning concept gives the full responsibility for the determination of unit structure to the students. It is the individual student's responsibility to reach his goals by the end of the unit, utilizing all available resources.

Goal-Centered Individualized Learning: The goal-centered individualized concept allows students to take an active role in deciding what it is they are going to learn and how they would like to learn it. They set goals, plan steps needed to reach the stated goal, and make a commitment to learning and improvement.

An Elective Curriculum: The elective curriculum allows the student to choose not only the sport which interests him but also the skills within the sport elected.

Quinmester Extended School Year Plan: The Quinmester program consists of five nine-week sessions, including the 180 instructional days which is the present state requirement, extended over a 12-month school year. Each nine-week term is called a quin. The student may elect to attend school any four of the five quins or during all five quinmesters. The calendar allows for the usual holidays, including Easter and Christmas vacations and teacher planning days when students are not in school. Most courses of study are nonsequential. They are offered to students on an elective basis.

Student-Designed Program: The 11th and 12th grade physical education program is elective and completely planned by the students.

Contracting: All students taking physical education as an elective are enrolled in a class. Those who so desire are permitted to pursue units of study of their own choosing; they report to class only for attendance purposes.

Individualized Approach to Learning: This concept allows a student to direct his own learning (based on his needs and interests) within the structure of the new learning model and to progress through the units at his own pace.

Performance Objectives: Utilizing performance objectives, the pupil is given a unit of activities. The student then performs. His performance is assessed as satisfactory or unsatisfactory by the instructor using predetermined standards.

Special Physical Education: A program of adapted, corrective, and developmental activities is provided for students with physical and mental disabilities.

See Appendix C, p. 114, for examples of innovative approaches to physical education.

Suggested Outline of a Secondary School Physical Education Program for Girls

Desirable Experiences

	Core Experiences	*Related Experiences*
Fall	Organization Archery Field Hockey Speedball Swimming	Archery Badminton Casting Golf Fencing Horseback Riding Tennis Paddle Ball
Winter	Volleyball Basketball Gymnastics Badminton Dance Fencing Swimming Tumbling	Bowling Diving Fencing Indoor Field and Track Lifesaving Skating Ice Roller Skiing Synchronized swimming Paddle Ball
Spring	Softball Archery Golf Lacrosse Swimming Tennis Track and Field	Archery Badminton Casting Fencing Golf Horseshoes Rope skipping Tennis Croquet

---

Note:

(1) Progression and evaluation in the teaching of these activities are assumed.

(2) Body conditioning activities should be conducted during all seasons.

(3) Activities may be rotated from season to season.

Suggested Outline of a Secondary School Physical Education Program for Boys

Desirable Experiences

	Core Experiences	*Related Experiences*
Fall	Organization Archery Touch Football or Flag Football Soccer Speedball Swimming Tennis	Archery Badminton Casting Fencing Golf Handball Horseback riding Tennis
Winter	Volleyball Basketball Gymnastics Badminton Dancing Fencing Swimming Tumbling Wrestling	Bowling Diving Fencing Folk Dancing Handball Ice Hockey Skiing Skating Ice Roller Indoor Field and Track Lifesaving Scuba Diving Swimming
Spring	Softball Tennis Golf Lacrosse Swimming Track and Field	Archery Badminton Casting Fencing Golf Horseshoes Tennis Croquet

---

Note:

(1) Progression and evaluation in the teaching of these activities are assumed.

(2) Body conditioning activities should be conducted during all seasons.

(3) Activities may be rotated from season to season.

Evaluation of Physical Education

Objectives

To plan for continuous evaluation of the program that is meaningful and purposeful for orderly and systematic progress for the realization of the objectives of physical education.

To develop the pupil's ability to evaluate his achievement in terms of growth, skills, social relationships, and to learn about his abilities in order that he may become increasingly self-directive and self-confident.

To appraise and judge a student on the basis of his progress rather than the progress of others.

To adapt the program to the health status of pupils and help each pupil understand his strengths and limitations.

Purpose

To determine the individual status and needs.

To motivate the pupil.

To provide a basis for recognizing achievement.

To determine progress, improvement, pupil learning, and effective teaching.

To group pupils according to ability.

To arrive at a grade.

Kinds of Evaluation

Cooperative teacher-pupil evaluation.

Cooperative pupil-peer evaluation.

Teacher evaluation.

Pupil self-evaluation.

Evaluation by groups and leaders.

Utilization of standardized skill, physical fitness and knowledge tests.

CHAPTER XI

Program for Exceptional Children

A physical education program for exceptional children is a broad and diversified program of developmental experiences suited to the interests, capacities, and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in the vigorous activities of the general physical education program on a day-to-day basis without additional and more specific individualized instruction.

Recommendations:

Special needs and interests of pupils should be determined by the use of various evaluation procedures, such as periodic and special medical examinations, physical fitness tests, skill tests, and sociometric techniques.

Appropriate facilities, equipment, and supplies should be provided when special physical education classes are needed.

A properly planned and conducted physical education program which meets the specific needs and performance levels of the individual is preferable to a common program for all exceptional individuals.

A reasonable approach to program planning for exceptional individuals is to decide what desired outcomes are indicated by the evaluated needs of the children. Then activities should be selected, modified, and developed which bring about the behavioral changes sought. Special activities—class and extraclass—should be provided for those pupils who:

Are physically underdeveloped,
Have physical handicaps which do not permit normal participation,
Have postural defects which require special activities, as prescribed by a physician,
Are mentally handicapped and are not capable of progressing with regular groups,
Have a deep-seated fear, hatred, or dislike of physical education activities.

Pupils who have need for special activities should be included in regular class instruction whenever possible and be provided additional special activities to meet their particular needs. These students must realize a feeling of belonging to a normal society and must learn to find their places in that normal society.

The school physician and psychologist must be utilized in determining the need for special activities and the extent to which a pupil may participate.

Regardless of the approach used, the physical education program for exceptional children should be as well-rounded as those for regular students and should include activities that develop both physical fitness and motor skills. Experiences, based on the developmental needs and performance levels of individual students, should be selected, modified, or developed. The activities must be well planned and conducted so that the objectives of physical education, as stated in this guide, will be met within the limits of the individual's disability.

Planning for the Handicapped Student in Physical Education[1]

Exceptional Condition	Factors with Implications For Physical Education	Guides for Planning Physical Education
Cardiac—May be functional (innocent) or organic (heart defect)	Functional cases may develop into organic cases if proper care is not taken	1—Observe closely. 2—Have frequent medical reexaminations and reports. 3—Secure cooperation of parents in following good rules of health—diet, rest, play, understanding, medical care, etc.
1—Active condition	1—Frequent pain and discomfort 2—Fever in some cases 3—Low resistance to infections 4—Low vitality and interest	1—Youth should not be in school.
2—Convalescent state	1—Aches in joints 2—Tires easily 3—Shortness of breath 4—Emotional or adjustment problems	1—Restricted activity and short school day. 2—Frequent rest, as indicated by discomforts. 3—Encouragement to join in play. 4—Gradual return to normal activity.
3—Inactive state	1—Same as above, if any	1—Observe carefully; if changes seek immediate medical recommendations. 2—Most cases can participate fully in the class activities. Adapt the activity to the child by allowing more rest periods, playing in less active positions, emphasizing accuracy in performance rather than speed and endurance. 3—Allow opportunities for rest. 4—Avoid highly competitive activities. 5—Watch for early signs of fatigue. 6—Watch for breathing through the open mouth.

---

[1] Parts of this section are reprinted from *Guide for Teaching Physical Education, Grades 1-6*, Columbia, S.C., State Department of Education, 1966, and *Special Physical Education: Adapted, Corrective, Developmental,* by Dr. Hollis F. Fait, published by W. B. Saunders Co., 1966.

Cardiac Cases are classified by physicians according to the functional capacities of their hearts. The activities in which they are able to participate are determined accordingly. The four classes and some of the activities suitable for each are:

Class I: Those who do not experience undue fatigue or discomfort from ordinary activity. Most activities may be offered unless the participation will be highly competitive. Suggestions include:

- Softball
- Paddleball
- Swimming
- Tetherball
- Badminton Doubles
- Handball Doubles
- Apparatus and Tumbling
- Modified Tennis
- Balance Stunts
- Water Games
- Dancing
- Table Tennis
- Cycling
- Fencing

Class II: Those for whom ordinary physical activity results in fatigue and pain. Activities suggested for moderate participation by this group are:

- Archery
- Croquet
- Shuffleboard
- Fly and Bait Casting and Spinning
- Interpretative Dance
- Table Tennis
- Bowling
- Horseshoes
- Hiking
- Bag Punching
- Outdoor Education
- Games of Low Organization
- Parachute Play

Class III: Those who experience fatigue and pain from less than ordinary physical activity. Mild activities for those in this group include:

- Walking
- Fly and Bait Casting and Spinning
- Outdoor Education
- Target Shooting
- Basketball Goal Shooting
- Shuffleboard
- Darts
- Quoits
- Breathing Exercises
- Light Exercise to Music
- Light Dancing

Class IV: Those who are unable to do any physical activity without discomfort. Bed rest during the physical education period may be prescribed by the doctor for a student in this class.

Orthopedic—These would involve missing, paralyzed, or malformed arms and/or legs. The specific area involved would determine the limitation.

Exceptional Condition	Factors with Implications For Physical Education	Guides for Planning Physical Education
1—One arm	1—Balance is affected 2—May have superior strength in remaining arm 3—Where a partial limb remains, there may be irritation 4—Emotional involvement	1—If the child has a prothesis (artificial limb), there may be no problem and the child participates in all activities. 2—If recent loss, give encouragement and chance to succeed. 3—Encourage development of balance through stunts (gymnastics). 4—Give extra protection where safe performance demands high degree of balance as in bicycling, aquatics, apparatus (ladders, ropes, etc.), jumping and landing. 5—Insure protection of sensitive stump in activities where contact might occur—ballhandling activities, dual stunts, pyramids, striking activities. 6—Help classmates understand and accept the child. 7— Activities which are particularly good are running, dodging, aquatics, rhythms, leg strength stunts, single arm throwing (for distance and accuracy), bowling.
2—Both arms	1—Balance greatly impaired 2—3 and 4 above	1—If prothesis is present, limitations are decreased. 2—See sections 2 through 6 above. 3—Activities which are particularly good are running, dodging, leg strength stunts, rhythms, balance activities (with protection).

Orthopedic (contd.)

Exceptional Condition	Factors with Implications For Physical Education	Guides for Planning Physical Education
3—One leg	1—Restricted mobility 2—May have superior strength in remaining leg 3—Where partial limb remains, there may be some irritation 4—Emotional involvement 5—Foot balance affected	1—If prothesis is present, there may be little limitation. 2—Provide protection as needed (see above). 3—Give group security (see above). 4—Adapt activities to limitations of child by allowing someone else to run for child, placing child in position which requires less speed. 5—Activities which are particularly good are bowling, bicycling, throwing, batting, stunts using arms and shoulders, outdoor education, aquatics, rhythms in which speed of movement is not a factor.
4—Both legs	1—1, 2, 3, 4, 5 above with greater limitations	1— See sections 1 through 4 above. 2—Activities which are particularly good are bowling, throwing, catching, striking stunts, gymnastics utilizing arms and shoulder strength, aquatics, outdoor education, activities of moderate speed which encourage the development of balance in the standing position.

Other Suggested Activities for Students with Orthopedic Disabilities

Suggested activities for those confined to wheelchairs are:

- Archery
- Swimming
- Bowling
- Wheelchair
  - Hockey
  - Volleyball
  - Basketball
  - Square Dancing
  - Racing
- Modified Gymnastics
- Modified Rope Climbing
- Swimming
- Water Games
- Fly and Bait Casting
- Box Hockey
- Table Tennis
- Boating
- Corrective Exercises
- Darts
- Quoits
- Horseshoes
- Target Shooting
- Weight Training
- Weight Lifting
- Bag Punching
- Breathing Exercises
- Rope Climbing
- Pole Climbing

Suggested Activities for Students with Orthopedic Disabilities (contd.)

Modified Fitness Test Fencing
—Sabre, epee, foil

Selected Track and Field Activities:
- Discus
- Javelin
- Club Throw
- Shot Put
- 40-Yard Dash
- 60-Yard Dash
- 220-Yard Dash
- 440-Yard Dash
- 880-Yard Dash
- Relays

Those wearing leg braces or using crutches can take part in:

- Archery
- Shuffleboard
- Fly and Bait Casting
- Tether Ball
- Target Shooting
- Boating
- Darts
- Quoits
- Modified Softball
- Rope Climbing
- Modified Gymnastics
- Bowling
- Modified Basketball
- Corrective Exercises
- Horseshoes
- Weight Training
- Weight Lifting
- Modified Fitness Test
- Fencing
- Modified Gymnastics
- Swimming
- Water Games
- Table Tennis
- Selected Track and Field Activities
- Bag Punching
- Breathing Exercises

Activities suggested for those having arm paralysis are:

- Social, Tap, Folk, Square Dance
- Rope Jumping
- Cycling
- Swimming
- Water Games
- Modified Stunts
- Ice and Roller Skating
- Hiking
- Selected Track and Field Events:
  - 40-Yard Dash
  - 60-Yard Dash
  - 220-Yard Dash
  - 440-Yard Dash
  - Relays
  - Discus
  - Javelin
  - Shot Put
- Weight Training
- Weight Lifting
- Breathing Exercises
- Target Shooting
- Corrective Exercises

Exceptional Condition	Factors with Implications for Physical Education	Guides for Planning Physical Education
Visual—Partial or total. The degree of vision will determine the limitation.		
1—Total loss of vision	1—Tends to be overweight due to lack of freedom in moving about 2—Frequent accidents, falls, bruises, abrasions, etc. 3—Balance is affected 4—No emotional problems unless brought on by attitude of associates	1—Great need for vigorous activities and diet. 2—Provide protection where needed. 3—Help classmates accept child. 4—In teaching, move body parts manually to give the child the feel of the correct way to perform skills. 5—Indicate direction by use of sounds on targets.

Legally blind students usually are enrolled in special schools. Today, educators realize the value of enrolling blind students into integrated programs with their sighted peers. To integrate the sightless student into the regular activities, there need not be extensive modifications. The following examples show simple procedures that can be used to enable the blind student to make full use of his remaining senses and therefore compete effectively with sighted students.

Running (short events):

A piece of cord stretched from start to finish line is sufficient for short track events. The blind student holds the cord while running to the finish which can be marked by knots tied just before the finish line.

Running (long events):

The blind student can be matched with a sighted student of similar ability and join hands while running, allowing the blind student to set the pace.

Another procedure is for the blind student to grasp the sighted student just above the elbow with the thumb lateral so that he is positioned approximately one-half step behind and one-half step to the side of the sighted student.

Broad Jump:

If taught to jump when his feet hit the wood of the takeoff board, the blind student can broad jump like the rest of the class. If the student has no past experience in jumping, the standing broad jump should be taught first.

Archery:

A radio playing on top of the archery target is sufficient modification to "sight in" on the target.

Modern Dance:

For modern dance, the student can feel the body position of a classmate or the instructor to better understand the movements.

Water Skiing:

A sightless student can water ski safely if he stays in the wake of the boat.

Other suggested activities for legally blind students are:

Roller skating to music
Golf
Bowling
Modified stunts and tumbling
Boating
Selected Track, and Field Activities
Outdoor Education
Weight Training
Weight Lifting
Fly and Bait Casting
Light exercise to Music
Swimming
Water Games
Ball Handling Activities

Exceptional Condition	Factors with Implications for Physical Education	Guides for Planning Physical Education
2—Partial loss of vision	1—Same as 1 through 4 above	1—Same as above. 2—If glasses are worn, require plastic guards at all times.

Partially sighted students are often enrolled in the regular physical education class if their vision is between 20/70 and 20/200 or if there is no prognosis of progressive vision deterioration. These students will benefit greatly from contacts with normal groups. Ideally, each should be assisted in the physical education class by a seeing partner. Activities should be adapted to the child's limitations.

Suggested activities include:
- Roller Skating to Music
- Archery
- Golf
- Track and Field
- Bowling
- Modified Stunts and Tumbling
- Basketball Goal Shooting
- Wrestling
- Fly and Bait Casting
- Social, Folk, Square and Modern Dancing
- Light Exercise to Music
- Marching
- Body Building
- Boating
- Swimming
- Water Games

Other activities may be modified to meet the needs of the partially sighted student.

Hearing—(total or partial)	1—Balance is impaired 2—Emotional problems are frequent 3—Child may appear to be uncooperative or careless	1—Need activities which develop balance. 2—Help classmates understand and accept child. 3—Use patience at all times. 4—If hearing aid is used, encourage constant use and give protection as needed. 5—Give directions when child is facing teacher and in normal head-upright position. 6—Use visual aids frequently. 7— Give child responsibilities.

The majority of students with hearing impairments are enrolled in public educational institutions. Since most deaf students differ from their normal peers largely in their ability to hear, they should take part in as many regularly required physical education activities as possible.

Some suggested activities for students with hearing impairments are:

- Dancing
- Roller or Ice Skating
- Tennis
- Conditioning Exercises
- Soccer
- Track and Field Events
- Flag Football
- Archery
- Gymnastics
- Basketball
- Handball
- Weight Lifting
- Field Hockey
- Volleyball
- Badminton
- Swimming
- Speedball
- Softball
- Recreational Games
- Weight Training
- Modified Stunts and Tumbling Games
- Squash Doubles
- Water Games
- Rope Climbing

Exceptional Condition	Factors with Implications for Physical Education	Guides for Planning Physical Education
Malnutrition—This may be overweight or underweight. Overweight is far more serious than underweight.		
1—Underweight	1—Tires easily 2—May be irritable 3—Susceptible to infections	1—Seek medical advice on cause of condition. 2—Seek home cooperation in attacking cause. 3—Secure cooperation of parents in promoting good health habits—rest, diet, play. 4—Needs frequent rest. 5—Needs to be taught how to relax to conserve strength. 6—Protect from infections.
2—Overweight	1—Tires easily 2—Younger children usually have happy disposition, but older ones may develop social problems 3—Lacking in speed, agility, and endurance 4—Appears to have strength but cannot use it due to bulk	1—Medical advice is urgently needed. 2—Factor causing overweight must be removed. 3—If there is no organic factor involved, weight can be controlled by proper balance between food intake and work output or exercise. 4—Help child gain an understanding of how his abilities are limited by his weight. 5—Encourage vigorous physical activity at school and at home.

Students may participate in most of the normal physical education activities with minor adaptations.

Exceptional Condition	Factors with Implications for Physical Education	Guides for Planning Physical Education
Hay Fever and Asthma	These are treated together because they involve breathing problems. 1—Discomfort 2—Difficulty in getting breath 3—Cause may or may not be known 4—Often increased by emotional tensions.	1—Discontinue play when it causes discomfort. 2—Give frequent rest periods. 3—If cause is known and can be controlled as in the case of dust or pollens, use a mask or play in less affected area. 4—Avoid highly competitive situations.
With a few exceptions, such cases can participate in normal activities.		
Epilepsy	Types of epilepsy range from a mild twitching to a severe seizure or unconsciousness.	1—Read medical report carefully and ask for information relative to severity and frequency of attacks, prescribed medication, and cause. 2—Know first aid necessary. Keep victim lying on back; do not restrain movements; put soft object in mouth to protect tongue; keep child quiet after attack. 3—Avoid situations which tend to cause attacks. 4—Avoid activities which involve climbing and moving apparatus. 5—Avoid contact activities. 6—Avoid highly emotional or competitive situations.
Except as indicated in 4, 5, 6, the normal activities can be performed.		
Diabetes	1—Frequent mental and physical fatigue 2—Frequent weight changes 3—Nervous 4—Subject to infections 5—Insulin shock and coma may occur 6—Needs exercise to help reduce insulin need	1—Know the medical facts of the case. 2—Get cooperation of parents in promoting good health habits: rest, diet, medication, play. 3—Avoid highly competitive activities. 4—Protect child from injuries to avoid infections.
Normal activities are good if the point of marked fatigue is avoided.		

Exceptional Condition	Factors with Implications for Physical Education	Guides for Planning Physical Education
Posture—This may be organic (malformed bones) or it may be functional (habit-caused).		
1—Organic	1—From no involvements to pain and disfigurement	1—Medical advice is necessary. 2—Follow prescribed exercises with extreme care. 3—Avoid activities which aggravate or increase deviation.
2—Functional	1—Same as above 2—Low endurance of specific muscles involved 3—May affect flexibility	1—Have medical classification as functional. 2—Request medically prescribed corrective exercises and follow them carefully. 3—Use activities which stretch shortened muscles and which strengthen stretched or elongated muscles. Strive for a balance in the length and strength of paired muscles. 4—Emphasize the relationship of proper body position (posture) to physical performance.
Students may participate in most of the normal physical education activities but should avoid activities which aggravate or increase deviation.		
Low Physical Ability	At every grade level, there are children who seem to have lower ability to perform physical skills than the normal. These children may be innately endowed with less physical ability or may have had less opportunity than others. Since it is difficult, if not impossible, to know the cause, the teacher must try to help the child improve.	1—Teach skills which should have been learned at a lower age. 2—Give much encouragement and praise. 3—If a child is not strong but is flexible, encourage him to use his flexibility; if he is not fast but is strong, encourage him to excel in strength activities. 4—In team activities place the child in positions which utilize his best skills and which infrequently use his weak skills. 5—Teach child his limitations and strengths and how to select recreational activities.
Students should participate in an individualized physical education program based on their performance level.		

Exceptional Condition	Factors With Implications for Physical Education	Guides for Planning Physical Education
Low Mental Ability	Mental ability as physical ability differs with children. The child whose mind will not retain long lists of rules or directions, or whose mind cannot work fast, will have difficulty in physical education.	1—Keep rules to a minimum. 2—Give directions slowly and repeat them. 3—Teach small parts, one at a time. 4—Review frequently. 5—Place the child in positions which allow time for deciding what to do. 6—Avoid tense situations.

Suggested Activities for the Mentally Handicapped:

Basic Movement and Fundamental Skills . . .

- Exploratory Movement on Command
- Exploratory Movement With Drum Beat or Other Percussion for Command
- Exploratory Movement With Music
- Interpretive and Creative Movement

Rhythmical Activities . . .

- Fundamental Rhythms
- Creative Movement and Rhythms
- Singing Games and Folk Dances
- Mimetics
- Rhythmic Games
- Square Dance and Social Dance
- Story Games and Dramatic Plays

Games . . .

- Games of Low Organization
- Specific lead-up Games for Definite Activities and Sports such as Soccer, Football, Softball, Basketball and Volleyball

Individual and Dual Activities . . .

- Archery
- Beanball
- Track and Field
- Croquet
- Shuffleboard
- Handball
- Golf
- Horseshoes
- Tetherball
- Bowling
- Tennis
- Quoits

Stunts, Tumbling, and Apparatus Activities (Basically the same activities as with normal children) . . .

Aquatics Activities . . .

- Swimming
- Canoeing
- Fishing
- Scuba Diving
- Boating
- Water Skiing

Winter Activities . . .

- Sledding
- Ice Skating
- Skiing
- Hiking

Miscellaneous Activities . . .

- Body Mechanics
- Remedial Exercises
- Bike Riding
- Roller Skating
- Physical Fitness Activities
- Posture
- Miniature Golf
- Paddle Ball
- Bag Punching
- Camping
- Box Hockey
- Field Trips

Desirable Experiences

Light Activities

- Archery
- Recreational Games
  - Shuffleboard
  - Darts
  - Quoits
  - Horseshoes
  - Paddleball
  - Table Tennis
  - Walking
- Dancing
  - Folk
  - Social
  - Square
- Croquet
- Fly and Bait Casting and Spinning
- Interpretative Dance
- Games of Low Organization
- Target Shooting
- Basketball Goal Shooting
- Light Exercise to Music
- Corrective Exercises
- Breathing Exercises
- Parachute Play

Moderate

- Tetherball
- Badminton
- Conditioning Exercises
- Swimming
- Water Games
- Bowling
- Running
- Weight Lifting
- Volleyball
- Basketball—Short Court
- Softball—Short Bases
- Bag Punching
- Deck Tennis
- Handball
- Hiking
- Games of Low Organization
- Box Hockey
- Boating
- Rope Jumping
- Cycling
- Ice and Roller Skating
- Marching
- Fencing
- Trampolining
- Squash
- Gunny Sack Race

Strenuous

- Football (Flag)
- Gymnastics
- Apparatus and Tumbling
- Soccer
- Speedball
- Field Hockey
- Track and Field
- Wrestling
- Wheelchair Hockey
- Wheelchair Racing
- Wheelchair Volleyball
- Wheelchair Basketball
- Wheelchair Square Dancing
- Rope Climbing
- Selected Track and Field Events
- Weight Training
- Modified Fitness Tests
- Pole Climbing
- Ladder Walk

Some students with disabilities may successfully participate in many other experiences generally found in the regular class program. Nevertheless, all experiences should be carefully selected, modified, or developed based on the developmental needs and performance levels of the individuals. The activities must be well planned and conducted so that the objectives of physical education, as stated in this guide, will be met within the limits of the individual's disability.

It is no longer excusable to deny physical education to the handicapped. Programs for the exceptional child can be planned and conducted which develop physical fitness, social orientation, and mental well-being.

Chapter XII

Extraclass Experiences

9-18-year-olds

The physical education curriculum includes an extraclass program. This phase is necessary if the program is to be considered comprehensive. The term *extraclass* is used in preference to *extracurricular* because such a program should be considered within the total curriculum of the school. This component of the program serves as an adjunct to the class period which is primarily instructional in nature. Activities included in the extraclass program should be those which are an outgrowth or extension of activities which are taught during the regular physical education class period.

Intramural Experiences

Intramural experiences are those activities which are organized and conducted for voluntary competition between students within the same school.

Recommendations:

All pupils including those who do not perform well should be encouraged to participate in this phase of the program. Exceptional children should be given special encouragement to participate, within the bounds of their capabilities.

All pupils should have opportunities to choose from a broad and varied program of activities.

Participation for pleasure should be the main objective, eliminating excessive pressure to win.

Pupils who participate in an interscholastic sport should not be allowed to participate as players in the same sport on an intramural basis.

Adequate time to use facilities should be provided, preferably after school or on Saturday. In schools where class or bus schedules prevent the use of this time, it may be necessary to utilize the noon hour or the activity period. Many schools schedule late buses for pupils who participate in intramural activities.

League and tournaments should be organized in a manner that will equalize competition as much as possible. Frequently, homerooms or clubs are used as units for organization.

Coeducational opportunities should be offered in appropriate activities.

Intramural activities should be an outgrowth of the class program.

Awards should have an intrinsic value.

Pupil participation in planning, organizing, and leading intramural activities should be encouraged.

Suggested Intramural Experiences

Fall

Archery
Badminton
Cross-country (boys)
Field hockey (girls)
Golf
Handball
Soccer
Speedball
Swimming
Touch or flag football
Tennis
Water Polo

Winter

Badminton
Basketball
Bowling
Handball
Indoor track
Ice hockey (boys)
Skiing
Swimming
Table tennis
Volleyball
Wrestling (boys)
Water polo

Spring

Archery
Baseball (boys)
Golf
Lacrosse
Softball
Swimming
Track and field
Tennis

Extramural Experiences

Extramural experiences are those activities which are conducted as sports days, play days or other approved interschool activities without involving a season-long schedule, league competition, or championship.

Recommendations:

A wide variety of activities should be offered to enrich the experiences of as many pupils as possible.

Pupils who participate in an interscholastic sport should not be allowed to participate as players in the same sport conducted as an extramural activity.

More emphasis should be placed on participation than on a high degree of skill and competition. A broad and diversified program of activities should be provided so that all students will be challenged.

Students should be taught and provided opportunities to officiate as much as possible.

Activities for both boys and girls should be provided in the scheduling of facilities and transportation.

Suggested Extramural Experiences

Fall

Archery
Badminton
Cross-country (boys)
Field hockey (girls)
Golf
Soccer
Speedball
Swimming
Touch football (boys)
Tennis

Winter

Badminton
Basketball
Bowling
Indoor track
Ice hockey (boys)
Skiing
Swimming
Table tennis
Volleyball
Wrestling (boys)

Spring

Archery
Baseball (boys)
Golf
Lacrosse
Softball
Swimming
Track and field
Tennis

Interscholastic Athletic Experiences

Interscholastic athletic experiences are activities which offer enriched opportunities for the more highly skilled individuals to represent a school in competition with representatives from one or more schools, either within a school system, or with schools in other communities. Such competition usually involves season-long schedules, organized practices, league competition, and championships.

Recommendations:

The interscholastic athletic activities should be an effectively organized and well-coordinated phase of the secondary school curriculum and an integrated and balanced part of the total physical education program.

Interscholastic competition should be employed only after a well-planned and well-conducted intramural program.

Amateurism, not professionalism and commercialism, should be the basic theme of operation.

Interschool competition of highly organized varsity patterns is definitely not recommended for children in the elementary grades (K-6).

Education in game ethics and sportsmanship should be promoted for participants, spectators, and coaches.

Participants should be covered by adequate and appropriate insurance, in case of injury.

Suggested Interscholastic Athletic Experiences

Fall

Cross-country (boys)
Football (boys)
Soccer (boys)
Field hockey (girls)
Tennis

Winter

Badminton
Volleyball
Basketball
Gymnastics
Ice hockey (boys)
Indoor track
Riflery
Swimming
Wrestling
Bowling
Skiing

Spring

Baseball (boys)
Golf
Lacrosse
Tennis
Track and field
Softball

The Connecticut Association of Secondary Schools controls interscholastic athletics in secondary schools through one of its subsidiary arms, the Connecticut Interscholastic Athletic Conference.

Recreational Experiences

Recreational experiences are those activities which provide the pupil with the knowledge, understanding, appreciation, and proficiency in skills to perform a variety of physical and social skills which may be used for leisure during present and future life.

Recommendations:

Schools should cooperate with other agencies in the community in providing recreational opportunities for all the people.

School facilities should be used evenings and weekends for recreational purposes.

In the senior high school, especially in grades 11 and 12, there should be an emphasis on lifetime activities.

Students should have fun, learn new skills, perfect old ones, and follow special interests in an informal atmosphere.

Students should share in planning and conducting their activities.

There should be flexibility in recreational programs to allow for changes in interests and cultural patterns. This phase of the program should never be static.

Recreational activities offer opportunities for participation in indoor and outdoor activities which emphasize social factors rather than competitive factors.

Coeducational participation is recommended in this program wherever feasible.

Suggested Recreational Experiences

- Archery
- Badminton
- Bowling
- Casting (bait and fly)
- Dancing
  - Folk
  - Modern
  - Social
  - Square
- Deck tennis
- Fencing
- Golf
- Gymnastics
- Handball
- Hiking
- Horseshoes
- Horseback riding
- Ice skating
- Riflery
- Roller skating
- Rope skipping
- Shuffleboard
- Skiing
- Swimming
- Table tennis
- Tennis
- Volleyball

Coeducational Experiences

Coeducational experiences are those in which boys and girls participate together and can make wholesome social adjustments. Most of the activities which are enjoyed during leisure time lend themselves to coeducational activities. Agility and skill activities are more appropriate than those which require great strength and endurance.

Recommendations:

Coeducational experiences should be presented periodically in the class instruction program.

Some intramural and extramural activities should be planned on a coeducational basis.

Participants should be grouped for practice and competitive play according to skill and maturity levels.

Both boys and girls should be encouraged to accept responsibilities for planning and conducting the coeducational program under proper supervision.

Suggested Coeducational Experiences

- Ice skating
- Archery
- Bicycling
- Badminton
- Deck tennis
- Golf
- Fly and bait casting
- Table tennis
- Dancing
- Hiking
- Group games
- Handball
- Horseshoes
- Bowling
- Modified games
- Volleyball
- Unicycling
- Deck tennis
- Swimming
- Skiing
- Shuffleboard
- Surfing
- Roller skating
- Riflery
- Riding
- Quoits
- Outings

Related Experiences

Related experiences are those which are organized to enrich pupil experiences and are conducted as a council, association, or club. Many of the activities may be conducted on a coeducational basis, depending on the leadership and facilities available, as well as interests and abilities. Councils, associations, or clubs of this nature can provide instruction in activities which may or may not be included in the regular class instruction program.

Recommendations:

Qualities of good leadership and principles of democratic life should prevail in all activities.

Coeducational experiences should be provided in those activities where abilities and interests are comparable.

Special effort should be made to acquaint pupils with and to utilize the human resources and the desirable physical recreation opportunities in the community.

As many related activities should be conducted as can be properly administered and supervised so that the needs and interests of a maximum number of pupils will be met.

Suggested Related Experiences

Intramural Council
Safety Councils
Girls Athletic Association
Boys Athletic Association
First Aid Club
Gymnastic Club
Fencing Club
Rifle Club
Fishing Club
Cheerleading Club
Water Skiing Club
Hiking Club
Bicycle Club
Tobogganing Club
Skiing Club
Ice Hockey Club
Golf Club
Leaders Club
Demonstrations
School Service Club
Dance Club
Spectator Club
Life-Saving Club
Weight-Training Club
Camping Club
Hunting Club
Boating Club
Canoeing Club
Horseback Riding Club
Roller Skating Club
Ice Skating Club
Snowshoeing Club
Bowling Club

> Education, in any subject area, should be a meaningful experience, stimulating and immediately rewarding while creating enthusiasm for further knowledge. No longer is it presumed necessary to approach a subject with morbid determination. If an exciting atmosphere of learning is maintained, the children will be excited to learn . . . The main factors which contribute to enjoyment are: having adequate skills, being reasonably active, and being accepted by the group. Engaging in activities which present challenges, having opportunities to be creative, and participating in the planning are among other factors which contribute to enjoyment . . . If the experiences are satisfying, the children will work harder, play harder, and derive more benefit from the activity.
>
> —Marian H. Anderson, Margaret E. Elliot, Jeanne La Berge,
> *Play with a Purpose*

Chapter XIII

Class Organization and Administrative Procedures

The physical education program includes three major areas: class instruction; extraclass activities (i.e., intramurals, extramurals, sports clubs, recreation activities); and interscholastic athletics.

Pupil Orientation

With the approval of the local board of education and the building principal, each school building physical education department should have definite orientation procedures to acquaint new students with school policy, procedures, personnel, and activities. Parents, too, should know what the school is doing, what is expected of them and their children, and what activities offered. They should also know department requirements, policies, and procedures.

Time Allotment

The ideal plan should offer a daily class instruction period for each child taught by a physical education specialist, plus an after-school program for the beginner, the intermediate, and the highly skilled student. Adequate facilities and teaching staff must be available. Teacher-pupil ratio should be about 1:30.

The minimum time allotment recommended is three class instruction periods per week per student, plus a well-organized afterschool program for all students at all levels of ability.

One of the chief prerequisites to developing the kind of physical education program proposed in this guide is the provision of adequate time during the school day, supplemented by extraclass programs that begin in the intermediate grades.

This guide offers a program based upon the needs of children as determined by an assessment of the individuals in each group. Therefore, it follows that the exact amount of daily time used and the manner in which it is to be used should be flexible to a degree.

Depending upon the types of class scheduling done in each school, there may be some days when a group might participate for several short intervals of time (for example, three modules of 15 minutes), or for less frequent longer intervals (one set of 45 minutes.)

The total amount of time to be provided for physical education in each school system and for each class should be determined by:

1—The philosophy of the school system relative to the contributions which physical education can make to the total development of children.

2—The assessment of the needs of individual children in each group.

3—The availability of facilities.

4—The local curriculum of physical education.

5—The extent to which physical education activities are integrated into the total educational program.

6—The availability of trained personnel.

To assist local communities in determining desirable lengths of periods at various age levels, the following times are suggested:

3, 4, and 5-year-olds	15-25 minutes daily
6, 7, and 8-year-olds	20-40 minutes daily
9, 10, and 11-year-olds	30-45 minutes daily
12 and 13-year-olds	45-60 minutes daily
14 and 15-year-olds	45-60 minutes daily
16, 17, and 18-year-olds	45-60 minutes daily

It should be noted that these suggested times are exclusive of the time allotted for dressing, showering, recess, free and/or supervised play periods, and noonhour activities.

Scheduling

Scheduling physical education classes requires the same precise consideration that is given to scheduling academic subjects. In many cases, attention is focused upon careful assignment of pupils to academic classes, while physical education classes are arranged on the basis of administrative convenience. In such instances, grouping by grade levels may be disregarded, thus making it dificult if not impossible to conduct a sequential progression program.

Available facilities and equipment frequently present problems in scheduling physical education classes. However, within limits the program offered should conform in most cases to available facilities and equipment, although sound administrative organization regards this problem as temporary, with plans made to obtain the necessary means for implementing the desired program within reasonable time.

Student Involvement

All students should be involved each year in the instructional phase of the physical education program, including those participating in varsity athletics, sports clubs, dance clubs, and the like.

Adaptive Physical Education

Adaptive physical education should be provided for those pupils who are unable to participate successfully in the regular program.

Class Size

The pupil-teacher ratio should be the same for physical education classes as for other subject areas, with variations possible depending on the activity or teaching technique used. A standard size class usually consists of 25 to 30 students—the approximate enrollment in academic classes.

Personnel Needed

A certified physical education teacher should be available for every 350 students in secondary schools.

A certified physical education teacher should be available for every 450 students in elementary schools.

PPBS Budget Development and Procedures

According to Charles T. Avedisian, Director of Physical Education, Darien, Conn., public schools, "Budget time requires your best thinking and effort. Cooperative involvement of the teachers of physical education, coaches, principals, coordinator and director relative to the development and follow-up of the physical education budget is an unexcelled opportunity to prepare a budget which will determine to a large extent the quality, safety, and education of youngsters in the public schools."

Planning **P**rogramming **B**udgeting **S**ystems means you should:

Planning—Establish behavioral objectives

Programming—Coordinate activities and events to show creative results

Budgeting—Distribute resources

Systems—Be able to show how the various parts of your budget can be analyzed.

One feasible solution to the problem of inadequate fiscal-curricular planning is the planning—programming—budgeting system (PPBS). The impetus for this concept has come largely through government. PPB Systems are intended to aid educators in:

1—Identifying goals and defining objectives.
2—Designing programs to achieve objectives.
3—Analyzing systematically the alternatives available.

4—Providing decision makers with more and betbetter data.
5—Evaluating costs and effectiveness of programs.
6—Extending the time horizon in planning.
7—Allocating budget dollars to programs.
8—Increasing public understanding of and support for the schools.[1]

Program budgeting is a process under which priorities among the kinds of services the school district may provide are weighed, objectives are stated in operational terms, alternative means to accomplish the given objectives are analyzed, and a choice among competing means is made under criteria of efficiency in the use of resources.[2]

The objectives should be based upon program equipment needs and documented with the research where it is required.

Sensible planning and care should be used in the development of price estimates and requests. A realistic budget should reflect how it will provide for the safety of students, enhance the quality of instruction, and reflect prudence in business management.

Assessment of Budget Needs

The professional staff shall make a careful assessment of all physical education needs according to the following budget accounts. (**Note:** Budget accounts not listed shall be referred directly to the principal.)

This account numbering system *(USOE Handbook No. 2)* will continue to be used for some time, although a new numbering system is evolving for program budgeting purposes.

DIRECT REQUESTS—(Implemented by Responsibility Center head. *Example:* Director of Physical Education) . . .

220.08	Textbooks, fitness awards, etc.	
240.04	Teaching supplies, per pupil cost—	
	Elementary	$3.00
	Junior High	$4.00
	Senior High	$5.00
240.11	Towels	
250.03	Professional meetings	
720.44	Repair of equipment	
730.30	Replacement of equipment	
	Non-instructional—Specific items	
1020	Athletics	
1210	Playground equipment	
1230.13	New equipment	

INDIRECT REQUESTS——(Submitted by Director of Physical Education to other Responsibility Center Departments) . . .

230.04AV	Movie films, loop films, etc.
1230.03AV	Building
1220	Projectors, camera, tape recorders, etc.

Budget rationale, requests, and forms for developing behavioral objectives for each account should be provided by the principal and/or director. Two copies shall be typewritten with one copy sent to the Director of Physical Education and one to be retained by the teacher.

The teacher of physical education should be responsible for properly consulting with the Director of Physical Education and building principal prior to final presentation of all budget requests.

Teacher Load

The teacher-pupil ratio should be approximately 1:25 or 1:30 per class. It is recommended that the teacher's class instruction load not exceed five clock hours per day (25 clock hours per week), including one planning period per day.

The number of classes assigned to a physical education teacher per day is a better criterion for determining teaching load than is the number of hours spent in teaching.

---

[1] Harry J. Hartley, *Educational Planning-Program-Budgeting, A Systems Approach,* Prentice Hall, Englewood Cliffs, N.J., 1968.

[2] Charles S. Benson, University of California, *The Economics of Public Education,* Houghton Mifflin Co., Boston, Mass., 1968.

Class Size for Aquatics

For ideal teaching in the pool, the class size should be limited. It is recommended that not more than 25 students per instructor be scheduled at one time in situations where most of the students know how to swim. For beginner groups the number should not exceed 20. Homogeneous grouping according to ability is advisable for effective teaching. If the classes are organized heterogeneously with respect to skill, smaller groups should be scheduled. And more instructors will be needed. If additional teachers are not available, the swimming instructor should train and use student water-safety aides who have special skills in lifesaving and water-safety aid training. The use of student aides should be subject to approval of the local board of education.

Credit for Physical Education

It is desirable that credit in physical education be given toward promotion from grade to grade and graduation, as in other subject matter offerings. Credits and penalties should be applied for success or failure in physical education, as in other subjects.

Physical education is included in the curriculum because it contributes to educational outcomes. The credit is justified by the contribution physical education makes to the achievement of outcomes toward which all of education is directed.

Grading In Physical Education

Pupil evaluation should be made in accordance with the established philosophy of the school system. The grade should be derived from similar methods of evaluation, which include written tests, aptitude, cooperative teacher-pupil evaluation, teacher evaluation, pupil self-evaluation, evaluation by groups and leaders, and degree of participation.

Grading in physical education should represent the progress the student has made in achieving the objectives of the activity based on his developmental level and should not be marked on items over which he has no control. The student should be evaluated on his own progress, not necessarily on the progress of his peers.

A student's consistent effort to improve his work in class should have a direct effect upon his mark. In physical education, the scholarship grade is based upon knowledge of rules of games, techniques, skill tests, self-testing activities, knowledge of carryover sports, and activities.

Separation of Boys and Girls

Social mores and differences in abilities and interests make it advisable to provide separate classes for boys and girls part of the time in elementary schools, starting at the intermediate level or comparable stage of development. Boys and girls should be separated most of the time in lower, middle, and upper secondary school.

Arrangements should be made for coeducational participation in appropriate activities.

Progression

The physical education programs should show progression from pre-kindergarten or first grade through succeeding grades.

Each school district should determine what qualities, skills, and attitudes it wants high school graduates to gain from physical education. The basic guidelines suggested in this publication will hopefully prove useful in this regard.

These qualities, skills, and attitudes thus become the objectives of the entire school system. Hence, the program at various grade levels should be developed to accomplish these objectives.

Roll Call

A teacher is legally responsible for the group in his charge and should therefore keep an accurate record of attendance for each class session. In physical education, an exact system of recording should be devised because of the variations in student participation.

Excuses

In matters of health, including school health, the family physician's decision *in writing* generally takes precedence over that of the school physician.

Assignments to restricted, remedial, corrective, or rest programs should be made upon request by either physician. These recommendations should state specific reasons for requesting excuses from physical education. Extended excuses may be for variable periods of time up to one school year.

Temporary excuses should be accepted only on the basis that the pupil's health would be impaired by physical activity. These excuses may be requested by parents, by a nurse, or by the pupil himself. But the excuses should not be valid for a period of more than one week. Thereafter, an excuse from a physician should be required. Temporary excuses should contain the reason for the request. And they should be cleared through a central office. The physical educator should get a copy of the excuse slip with the dates of absence and reasons for absence indicated. The excuse should be filed with the student's cumulative record.

Time allocated to physical education should be used for that particular purpose. When physical activity is not possible, study assignments should be made in selected reference works in the library. Assignments should be made which relate to the unit or topic being considered in the regular physical education program.

Moderation in physical activity with limited participation in intensive sport competition during the premenstrual and first half of the menstrual period is recommended for girls who exprience moderate or considerable premenstrual discomfort and/or dysmenorrhea.

Participation by girls in physical education activities should be permissive, but not necessarily compulsory, during this period. Girls should be *encouraged* to participate as usual. But they should not be *required* to participate.

It is recommended that varsity athletes not be excused from the physical education class program. During units of instruction in which their specialty sport is being taught, physical education teachers may use squad members as demonstrators and leaders. If the class program is broad and diversified enough, the varsity athlete may select another unit within the required program. During other units, he usually needs as much instruction as other students.

Classification

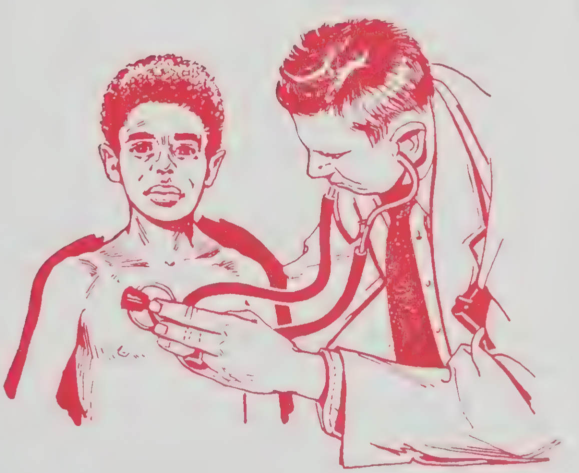
Students should be classified in most physical education activities to: (1) provide for individual needs, (2) promote fair competition between individuals or groups, (3) facilitate instruction, (4) serve individuals of like interests and abilities, and (5) insure program continuity. However, in the use of movement education, there is less need for separating students because of differences in abilities and interests.

Assignment to Physical Education Classes

Assignment to physical education classes should take into consideration sex, skill, maturation, grade level and health status.

Medical Examinations

According to Connecticut Statutes, Section 10-206, every student must have a thorough medical examination every three years.[3] This is usually done beginning with pre-school or first grade, and upon entry to grades four, seven, and ten. A medical report should be on file after any serious illness to prevent injury to the child because of overexertion. Many functions are served by the use of medical examinations. Among these functions are: the determination of physical defects; the recommendation of corrective procedures for children with remediable defects; the recommendation of modified programs for those with nonremediable defects; the notification to parents of the status of their child's physical condition; educating children to the results of their medical examination.



Connecticut law requires that students receive medical exams every three years. Those in interscholastic sports should be examined during the first month of the school year.

---

[3] Appendix A, Sec. 10-106, p. 111.

In interscholastic sports, boys and girls should be required to have a medical examination before each sport season. Some physicians feel that a thorough examination is needed after each sport season. A postseason checkup is encouraged.

After a period of illness, or after an injury, an athlete's return to practice or competition should be subject to a physician's approval.

Every effort should be made to have physical examinations completed within the first month of the school year. This policy offers protection for both teacher and student. It protects the student in poor health against advancing further from normal. And it protects the educator from working against undetected physical defects.

The trend is toward having the family physician conduct medical examinations. He is aware of the child's medical history and should be able to administer a more complete examination than another doctor could.

Insurance

All schools should have an accident insurance plan which is broad, comprehensive, and tailored to the needs of the individual school or system. Five types of accident insurance available are:[4]

1—Commercial insurance policies written on an individual basis.

2—Student medical benefit plans written on a group basis by commercial insurers.

3—State high school athletic association benefit plans.

4—Medical benefit plans operated by specific city school systems.

5—Self-insurance.

There are four types of policy which may be purchased to insure against pupil accidents in the physical education program:

1—An overall policy which covers the whole physical education program, including class and extraclass (intramural and interscholastic) activities.

2—One which covers only class activities and intramurals.

3—One covering only interscholastic sports.

4—One which covers the class physical education program only.

Consideration by each local school system should be given the different types of insurance policies to determine which provides the best balanced and most complete coverage. This may be done by a survey to determine the need for insurance, after which specifications are drawn up which indicate the type and amount of insurance needed. Several insurance companies are then asked to evaluate the specifications and submit estimates of coverage and costs. After the school board has selected the best plan, parents should be informed about the insurance program. To make sure that the program is effective, pertinent records should be carefully kept and a yearly evaluation of the program made.

Accident Reporting

All accidents occurring in physical education or athletic activities should be reported immediately on the Student Accident Report Form. This form should contain a description of the cause of the accident and a notation indicating if some change should be made in the equipment or facilities to prevent further accidents of this nature.

Safety In Physical Education

A teacher in physical education should:

- Have a proper teacher's certificate in full force and effect.

- Operate and teach at all times within the scope of his employment as delimited and defined by the rules and regulations of the employing board of education and within the statutory limitations imposed by the state.

---

[4] Joint Committee, Administrative Problems in Health, Physical Education and Recreation, A.A.H.P.E.R., Washington, D.C., Revised Edition.

- Provide the safeguards designed to minimize the dangers inherent in a particular activity.

- Provide the amount of supervision for each activity required to insure the maximum safety of all the pupils.

- Inspect equipment and facilities periodically to determine whether or not they are safe for use.

- Notify the proper authorities forthwith concerning the existence of any dangerous condition as it continues to exist.

- Provide sufficient instruction in the performance of any activity before exposing pupils to its hazards.

- Be certain that the task is one approved by the employing board of education for the age and attainments of the pupils involved.

- Refrain from forcing a pupil to perform a physical feat which the pupil obviously feels he is incapable of performing.

- Act promptly and use discretion in giving first aid to an injured pupil, but nothing more.

- Exercise due care in practicing his profession.

- Act as a reasonably prudent person would under the given circumstances.

- Anticipate the dangers which should be apparent to a trained intelligent person (a legal principle known as "foreseeability").[5]

Fitness Tests (Motor Performance)

The fitness tests developed by the American Association for Health, Physical Education, and Recreation are recommended as a basic battery of tests. They are widely used in most schools. These tests are given to each third, sixth, ninth, and 11th grade pupil at a designated period during the school year. A complete description of these tests, including norms and direction for administering, is included in the *Youth Fitness Test Manual* published by the American Association of Health, Physical Education, and Recreation.[6]

The test battery includes seven test items which can be given in the gymnasium or outdoors and three aquatic tests. They are pull-up, for judging arm and shoulder girdle strength; sit-up, for judging efficiency of abdominal and hip flexor muscles; shuttle-run, for speed and change of direction; standing broad jump, for judging explosive muscle power of leg extensors; 50-yard dash, for speed; softball throw for distance, for judging cardiovascular efficiency; and aquatic tests, for protective skills.

The tests may be used as a means to judge the current level of physical and motor fitness that a pupil has achieved.

Boxing

Boxing is not recommended for inclusion at any grade level in the physical education program.

Policies and Regulations for Swimming Pools

All policies governing the use and operation of the swimming pool should be prepared and recommended by the director of health, physical education, and recreation and the physical education staff, and approved by the proper school officials, including the board of education. The policies and rules should be posted on appropriate bulletin boards located in such prominent places as locker rooms and pool areas where persons may readily read them. At the first meeting of each class, these rules should be read and interpreted.

Coeducational Experiences

These activities should include sports that do not call for personal contact and which are normally enjoyed by boys and girls.

Dance adds variety to the coeducational program.

Activities that emphasize agility and skill rather than strength and endurance are of the more suitable type.

---

[5] *Annual Safety Education Review*—A.A.H.P.E.R., 1201 Sixteenth Street, N.W., Washington, D.C., Revised edition.

[6] *Youth Fitness Test Manual*, A.A.H.P.E.R., 1201 Sixteenth Street N.W., Washington, D.C., Revised edition.

It is important that boys and girls enjoy wholesome boy-girl relationships in activities and appreciate the skills and interests of the opposite sex.

Coeducational activities should be included in the intramural program.

Elective via Activity Selection

Today's educational programs are being revised to become more responsive to the interests and needs of students in today's society. Students in many lower, middle and upper secondary schools are being allowed greater latitude in selection of courses. Fewer courses are being required, especially at the upper secondary level.

In view of the fact that certain desired outcomes of physical activity, such as cardiovascular fitness, are desirable for all on a continuing basis, it is important that students continue to participate in physical education programs throughout their school years—and, in fact, throughout life. Therefore, *all students should participate in a program in kindergarten through grade 12.* However, in the upper grades, provision should be made to offer a wide selection of activities from which the student may elect those in which he wishes to specialize.

If students have had a broad foundation in movement education at the elementary level, they should be allowed some opportunity to pursue their own special interests beginning in the middle secondary years. In the upper secondary years, provision should be made for students to select the *major share of their program* within the required program.

It should be recognized, however, that certain student needs may indicate continued required participation. Further, most schools require students to select a balanced program—e.g. (1) body conditioning, (2) team sports, and (3) individual sports.

It is also strongly urged that schools make every effort to provide a wide variety of lifetime sports in the upper secondary years.

Team Teaching

Basically, the plan involves groups of teachers in broad subject areas—often cutting across traditional subject lines—and engaged in teaching relatively large numbers of students. Hence, there are no conventional classes of 35 students.

The plan further presupposes that some teachers function better in certain areas than others and that an individual teacher's competence varies in working with larger or smaller groups. Thus, groups up to 150 students may receive lectures or demonstrations by a qualified teacher, while small groups of approximately 13 students meet in seminars, each with a teacher in charge.

The innovation for physical education not only allows teachers in this field to demonstrate their individual competencies in activities that comprise the program, but suggests appropriate utilization of teachers from other subjects in physical education and vice versa.

Evaluation—Program and Personnel

Program evaluation in physical education may include (1) studies by a professional staff of consultants, (2) use of AAHPER elementary and secondary school position papers on physical education and (3) self-evaluation by local school staff personnel.[7] and[8] Also, personnel evaluation for the improvement of instruction may be used as recommended by Daughtrey and Woods in terms of self-appraisal charts.[9]

Student evaluation may be based upon skill instruction, fitness tests, and body of knowledges and understanding tests.

---

[7] *Essentials of a Quality Elementary Physical Education Program,* a position paper, A.A.H.P.E.R., Washington, D.C., 1970.

[8] *Guidelines for Secondary School Physical Education,* a position paper, A.A.H.P.E.R., Washington, D.C. 1970.

[9] Daughtrey, Grayson, and Woods, John B., *Physical Education Programs: Organization and Administration,* Philadelphia: W. B. Saunders Co., 1971.

CHAPTER XIV

● Extraclass Organization and Administrative Procedures

Extraclass Organization

Intramural Experiences

Schools should have intramural programs that offer a wide variety of activities. The program is a supplement to and an outgrowth of the instructional program, and is keyed to meet the needs and interests of students. The activities progress in difficulty as students advance through school and improve their skills. All students are encouraged to participate, regardless of their skills or previous experience.

Activities vary according to the facilities, leadership, and equipment in the school. And they should be equally available to both boys and girls.

In the majority of cases, intramural activities come immediately following the close of the school days. In some cases, intramural activities may be conducted in the evening and on Saturday. The availability of facilities, equipment, and the season of the year may make it necessary for intramural activities to be conducted at a location other than the school.

Intramural awards, if given at all, should be simple and inexpensive. Team awards are more desirable than individual awards; but those, too, should be considered as temporary expedients for motivation. The joy of playing and competition should be the primary motivating factor in an intramural program. Recognition to participants should be given in the school newspaper, at assembly programs, or in bulletin board announcements.

Interscholastic Athletic Experiences

An interscholastic athletic program should be available to secondary school boys and girls who are interested in developing greater skills and abilities than those offered through intramurals and extramurals.

Competition with other schools should be carefully arranged and controlled. Practices relating to health and overall academic standings of students must be consistent with the basic philosophy of education.

However, only after a school can provide intramural and extramural activities in grades 7-12 that are designed to meet the needs and interests of the majority of students should the program be expanded to include interschool activities to meet the needs and interests of the few selected and highly skilled pupils.

In developing and implementing an athletic program, the planning, programming, budgeting-evaluation system (PPBES) should be utilized to establish goals, to combine activities and events which produce distinguishable results, and to determine cost and effectiveness in reaching objectives.

Athletic Associations

The Connecticut Association of Secondary Schools controls interscholastic athletics in secondary schools through one of its subsidiary arms—the Connecticut Interscholastic Athletic Conference. The board of control of the conference sets eligibility standards, and organizes and administers state athletic tournaments.

Membership is by schools which are represented by school principals, coaches, and consultants. State Department of Education specialists serve as ex-officio consultants.

Girls' interscholastic athletics are also controlled by the C.I.A.C., which maintains a girls' athletic committee. This committee sets the standards for girls' interscholastic competition and administers statewide tournaments for girls.

Girls Participating on Boys' Athletic Teams

Girls may, at the discretion of a member school, participate with boys in non-contact sports if there is no girls' team in the school. These non-contact sports are cross-country, golf, gymnastics, indoor track, swimming, tennis, and track.

Health Examination of Contestants

The demands of interschool athletics are so exacting that no one should participate in them without a thorough medical examination by a reputable physician. When boys or girls are allowed to play in such contests without a competent examination, the risks of injury are too great and the professional reputation of administrators too much in jeopardy. Consequently, it is required that contestants should have a medical examination before each sport season. After a period of illness or after an injury, an athlete's return to practice or competition should be subject to a physician's approval.

Parental Permission

Parental permission should be obtained before students are allowed to engage in interschool athletics. School systems usually have a form which is signed by the parents granting permission for the student to engage in specified activities.

Insurance Against Athletic Injuries

The local school board or the parent-teacher association should arrange for students to purchase at a nominal fee an accident policy covering all approved school activities. If this policy does not cover football, a special policy to cover the sport should be provided.

Travel

It is recommended that no Connecticut interscholastic athletic team travel beyond New York, New Jersey, and New England to participate in tournaments, meets, or games.

Officials

Only those officials who are competent and licensed should be employed to officiate interscholastic athletic contests for both girls' and boys' games.

Awards

The actual standards for giving awards should be established by the local athletic conference, in keeping with regulations adopted by the Connecticut Interscholastic Athletic Conference.

Eligibility

Schools must accept the eligibility standards adopted by the Connecticut Interscholastic Athletic Conference if they wish to compete with member schools. Schools not affiliated with the C.I.A.C. should establish and follow regulations of their own.

Participation on Outside Teams

Members of athletic squads should not be permitted to play on outside teams during the sports season while they are members of such squads. Violation of this rule should render the participants immediately ineligible to represent their school.

Excuses

The local school board and the league in which the school is a member should agree on the number of times athletic teams should be excused from regular classes during the season.

School Recreation

The time before school in the morning, the noon-hour period, and the time following the close of school should be organized on a recreational basis. The play should be supervised by an adult legally designated by the local school board. Student leaders may assist in conducting the program.

There should be a free play period for children to participate in the various activities learned during the instructional period. The recess period is not to be considered as a physical education period and should not be counted toward meeting the time requirement in physical education.

The School's Role in Community Recreation

The school should cooperate with all other agencies in the community in providing recreational opportunities for all the people. Since schools are built with tax funds, it is advisable that these facilities be used evenings and weekends for recreation. Town or school budgets should provide adequate funds for supervision, care, and maintenance above and beyond the school budget.

Just as school facilities should be made available for a community recreation program, so should community facilities—such as playfields, tennis courts, golf courts, and swimming pools—be available for school usage. The recreation program should not be in competition with the school; rather, it should supplement and complement the school program.

It is often advisable to use school staff personnel as recreation leaders if they are qualified, paid separately, and are willing to do the job. This is a good way of developing and maintaining a liaison between the school and community programs.

Chapter XV

Policies and Procedures Related to Facilities, Equipment, and Supplies

Number of Teaching Stations

The number of teaching stations needed for boys and girls is based on the total pupil enrollment policies pertaining to instructional physical education, the average number of pupils in a class, diversity of program, and the number of periods each week that a station can be scheduled for classes. Computation of the numerical minimum requirement for the secondary level is achieved by the following formula:[1]

$$\text{Minimum Number of Teaching Stations} = \frac{\text{Number of Students}}{\text{Average Number of Students per Instructor}} \times \frac{\text{Number of Periods Class Meets Each Week}}{\text{Total Number of Class Periods in School Week}}$$

If a school with a projected enrollment of 1,000 students has six class periods per day with an average class size of 30 students, and physical education is required on a daily basis, the formula application is as follows:

$$\text{Minimum Number of Teaching Stations} = \frac{\text{1,000 Students}}{\text{30 per Class}} \times \frac{\text{5 Periods per Week}}{\text{30 Periods per Week}} = \frac{5{,}000}{900} = 5.5$$

Since construction of a fraction of a teaching station would be impractical, six teaching stations would be required.

The following is recommended:

Elementary-school physical education classes may be organized by a number of methods. The average class size is usually based on the number of pupils in the classroom unit. Because of pupil-maturation differences, physical education periods generally vary from 20 minutes for pre-primary to 40 minutes for intermediate, with the school average (for computation purposes) being 30 minutes per class.

---

[1] This formula and the three which follow are reprinted from or based upon *Planning Areas and Facilities for Health, Physical Education, and Recreation*, Copyright, 1965 by Athletic Institute, Chicago, Ill., and American Association for Health, Physical Education, and Recreation, Washington, D.C.

The formula for computing the number of teaching stations needed for physical education in an elementary school is as follows:

$$\text{Minimum Number of Teaching Stations} = \text{Number of Classrooms of Students} \times \frac{\text{Number of Physical Education Periods per Week per Class}}{\text{Total Periods in School Week}}$$

Thus, if an elementary school with six grades has three classes at each level (approximately 400 to 500 pupils), with ten 30-minute physical education periods, teaching station needs can be calculated as follows:

$$\text{Minimum Number of Teaching Stations} = \text{18 Classroom Units} \times \frac{\text{5 Periods per Week}}{\text{50 Periods a Week}} = \frac{90}{50} = 1.8$$

Under the circumstances set forth above, the need is indicated for two teaching stations which will accommodate the 18 daily classes and allow two periods for club activities, special groups, and enrichment experiences.

Standards for Teaching Stations

- A minimum of 70 square feet per pre-primary student.
- A minimum of 100 square feet per primary and intermediate student.
- A minimum of 125 square feet per student in the lower, middle, and upper secondary school.
- Smaller units for special purposes may be necessary. These should be a minimum of 40 x 60 feet in size and equipped for the special needs served.

Location of Gymnasium or Field House Facilities

Adaptability to purpose favors locating the gymnasium or field house facilities adjacent to playing fields, and on the ground floor. Location of these facilities in a wing of the building helps to eliminate the possibility of objectionable noise in academic classrooms. With this arrangement, corridor gates and a separate entrance may be installed to separate this area from other parts of the school building, thereby aiding the traffic control of community groups.

Size of Gymnasium or Field House Facilities

The intended use of a gymnasium or field house determines its size. Factors to consider are: (1) school grade levels to be served, (2) number of teaching stations required, (3) official sizes of playing courts, (4) community use, and (5) spectator space.

Physically Handicapped Persons

All physical education facilities should be built or adapted so that all physically handicapped persons, including those in wheelchairs, should have ready access to them either as participants or as spectators.

The Field House

A comparatively new venture in indoor facilities is the dome field house. Regarded as an extravagance at first, many school architects now recommend this structure for reasons of economy. The area, unmarked by structural supports, serves a multiple purpose; It provides adequate space for a variety of physical education activities including athletics; as a meeting place it accommodates large groups assembled at commencement and other public functions—functions too large for the school auditorium. This facility is recommended over the traditional gymnasium for future builders.

Classrooms

New secondary school buildings should contain classrooms as a part of the field house gymnasium unit. Classrooms facilitate special instruction in play, exhibitions, posture, game rules and strategy, and numerous other items associated with the program. Include adequate storage space for supplies and equipment.

Staff Facilities

Adequate facilities for teachers are essential to effective performance of their duties. These include offices, dressing rooms, showers, lavatories, toilets, and storage space. Locate these facilities adjacent to the office. Some schools with large staffs may prefer a faculty dressing unit off the main dressing room.

Swimming Pool

A swimming pool should be considered a highly desirable facility in any school physical plant unless there are community swimming facilities adjacent to the school which can be used by physical education classes. A pool provides a teaching station for the instruction of swimming, diving, and water safety.

Pool Location

Pools should be built on the ground floor in order to provide ventilation and natural lighting. Proper location with respect to dressing rooms, showers, and toilets favors the routing of swimmers. Students leave the locker room, pass the toilet, and take showers before arriving at the pool entrance. Clearly marked and separate entrances and exits to and from the shallow end of the pool contribute to safety. At the close of the period students take showers and return to the dressing room. Pools used for both sexes have separate entrances and exits.[2]

Size and Shape of Swimming Pool

The design of pools depends upon the use made of them. Competitive swimming requires a pool length of 75 feet 1 inch long in conformity with official rules. Approved dimensions are 75 feet 1 inch long and a minimum of 45 feet across, which allows for six seven-foot lanes with an additional 1.5 feet outside lanes one and six for multiple use considerations. The shallow end approximates 3½ feet, and the deep end is governed by safe diving requirements. Most swimming authorities recommend a minimum of 12 feet where a 1-meter diving board is installed and 13 feet for a three-meter board. The pool bottom should have a slope of one foot in 15 feet in the shallow area and one foot for each three feet in the deeper water.

Capacity of the Pool

The number of students in a pool should be calculated on the basis of 40 square feet of water surface area for each pupil for instructional purposes, and 27 square feet of water surface area for each pupil for recreational swimming. To illustrate: In a pool 75 by 30 feet, there are 2,250 square feet of surface area, which will permit a maximum of 56 persons to use the pool for instruction and 83 for recreational swimming. These figures do not imply, however, that 56 people can effectively be taught during one class period. This will depend upon the type of instruction and the number of teachers.

Diving Boards

Regulation diving boards are 1-meter and 3-meters in height, depending on ceiling height and pool depth. A minimum depth of 12 feet is required for the 1-meter board and 13 feet for a 3-meter board. Not less than 15 feet of unobstructed space needed above the board. Boards 16 feet in length of aluminum or fiberglass are recommended.

Desirable Pool Temperatures

Desirable pool temperatures should be between 78° and 80° F. The temperature of the room should not exceed the temperature of the pool by more than 5° F. Special consideration should be given to heating and ventilation for the comfort of spectators as well as swimmers.

Acoustics

Swimming pools require special acoustical treatment.

---

[2] Jesse Feiring Williams, *The Administration of Health, Education and Physical Education*, Philadelphia: W. B. Saunders Company, 1966.

Standards for Sanitation

Local boards of health generally set standards governing the bacterial content of swimming pools; these standards may vary in different school districts. In one school district 300 bacteria per cc. may be permitted, whereas in another section of the state a higher or lesser amount may be permitted.

Proper daily testing of the water should be done. Use standardized recommended testing equipment. Cleanliness in and around pools is extremely important. Adequate custodial care must be provided.

Emergency Equipment

Emergency equipment should be available at all times, under the immediate supervision of an instructor or attendant who understands thoroughly the use of these implements. The necessary lifesaving equipment includes: pool hooks, ropes, and buoys. A resuscitator and/or inhalator may be a part of the emergency equipment.

Main Dressing Room

In secondary schools dressing rooms are needed which provide storage lockers for all pupils and dressing lockers for the peak physical education class load. Additional dressing rooms are desirable to accommodate interschool sport squads and community groups. Hair drying equipment should be available.

Lockers

Two types of lockers are recommended for the main dressing room. Storage lockers are used for physical education costumes, and dressing lockers are used for street clothing.

Locks

Each student should be furnished with a combination padlock. Two master sheets of all combinations should be prepared, one kept in the instructor's file cabinet equipped with a lock, the other in the fireproof safe of the principal's office.

Time for Dressing

The average time for dressing is from seven to 10 minutes to prepare for the instruction period, and from 12 to 15 minutes for the shower bath and to dress in street clothes. The proximity of locker shower facilities to teaching stations and the size of classes are factors that affect time for dressing.

Shower Room Location

Preferably, the dressing room and the shower room are separate but adjacent units. It is recommended that the shower room be placed on the ground floor rather than in the basement. In this preferred location, the shower room receives natural light and ventilation. And easy access is given to dressing rooms, lavatories, gymnasiums, and swimming pools. Such an arrangement facilitates supervision and community use.

Showers

The gang-type shower saves water and time and assures a bath of regulated temperature and duration. A sufficient number of individually controlled shower heads is essential for after-school and recreational groups and for athletic teams.

Gang-type showers are recommended for boys. Gang-type showers—similar to those recommended for boys—are also recommended for girls with approximately two to five individual showers and dressing cubicles to meet individual needs.

Toweling Room

An area approximately the size of the shower room, called a toweling room, should be provided between the shower and dressing rooms.

The Playground

The elementary school playground should consist of a minimum of five acres plus an additional acre for every 100 pupils of ultimate enrollment. This would mean a site of seven acres for 200 pupils.

The amount of land needed for a junior high school will vary from a minimum of 15 to 25 acres.

A senior high school needs a minimum of 25 to 30 acres. School enrollment and the extent of the program will determine additional land.

Types of Play Areas

Multiple-Use Paved Areas: Insures an all-weather section for various games such as volleyball, basketball, badminton, tennis, paddle tennis, shuffleboard, and a variety of community activities.

Tot Lot: A fenced-in area, a portion of which should be hard surfaced, serves children of preschool and kindergarten age. It is equipped with climbing structures and other suitable apparatus.

Apparatus Area: The new concept of non-moving equipment stimulates children to engage in active and creative play and maintains their interests for long periods of time.

Field-Games Area: The largest area of outdoor facilities is planned for such games and activities as archery, baseball, softball, field hockey, football, touch or flag football, soccer, and speedball.

Court-Games Area: The surface may be earth, paved, tartan, astroturf or other artificial surfaces. Included in this area may be separate courts for tennis, volleyball, handball, horseshoes, and basketball.

The Athletic Field: A separate area for interschool games and contests is an essential facility for senior high schools. It may also be used for neighborhood and community activities.

A quarter-mile oval track with a 220-yard straightaway and with spectator stand on both sides forms the basic plans for an average athletic field.

The football gridiron is located inside the running track. As a safety precaution, the oval within the track should be large enough to allow a minimum of 25 feet between the sidelines of the football field and the inside curbing of the track.[3]

Surfacing

No one surface contains all of the qualities desired. Each play area presents special problems requiring study in the selection of a satisfactory surface.

Many authorities recommend turf as the best surfacing material for general purposes especially on large game areas of two or three acres or more.

A blacktop surface gives reasonably satisfactory service for playgrounds in constant use.

Sandy loam contains many of the virtues of turf. Some authorities prefer loam to turf for reasons of economy of installation and maintenance and its availability for use after precipitation.

Tartan, astroturf, and other artificial surfaces are being used more and more by schools. Some artificial surfaces are considered suitable for all purposes.

Appropriate Clothing

All students should be encouraged to change to clothing that is deemed appropriate for the activity. The proper attire should provide for safety as well as for comfort and freedom of movement. Other factors which should be considered in encouraging and promoting the use of proper attire are:

Safety: The wearing of sneakers in preference to shoes allows for better traction, and the elimination of ties, dangling sleeves, or wide shirts aid in the prevention of accidents.

Economy: The wearing of a uniform to save ordinary street clothes and provide better freedom of movement during exercise periods.

Style: Girls are concerned with the style cut, design, and color of their costumes.

Cleanliness: The periodic laundering of uniforms or costumes.

Swimming Suits, Towels, and Bathing Caps

To assure a maximum condition of sanitation and safety, clean laundered towels and swimming suits should be supplied to students each time they use the pool.

Areas and Facilities Source

For further information related to areas and facilities, we recommend a copy of the publication entitled *Planning Areas and Facilities for Health, Physical Education and Recreation.* A publication of the Athletic Institute, Merchandise Mart, Chicago, Ill. 60654 and the American Association for Health, Physical Education and Recreation, 1201 Sixteenth Street, N.W., Washington, D.C. 20036.

---

[3] Ibid

Storage Rooms

Provide adequate storage rooms for supplies and equipment adjacent to the teaching station and on the same level. The recommended area is 250 to 300 square feet for each teaching station. Doors at least six feet in width, with a flush threshold, connect the teaching station and the storage room.

Inventory of Supplies and Equipment

Inventories of supplies and equipment should be taken at the beginning and end of every school year. Spot inventories should be made whenever necessary.

There are three categories of equipment and supplies. Inventories should be taken of:

1—Stationary equipment, such as ladders, rings, stall bars, and horizontal bars.

2—Movable equipment, such as trampoline, parallel bars, horse, side horse, and buck.

3—Supplies, such as basketball, softballs, volleyballs, badminton rackets, golf balls, and bowling equipment, furnished by the student. Towels and suits may be sent to outside laundries or washed in school laundry facilities.

Towel Service

Each school should be responsible for providing and paying for its own towel service if showers are required by that school. The towels may be school-owned or obtained on a rental basis.

Section 10-228 is related to soap and towel service and other supplies. The statute requires each town to purchase such books and supplies as are necessary to meet the needs of instruction in the schools, town, or district. This is interpreted to include soap and towels needed for physical education classes. See Appendix A.

Showering

Showering should be encouraged at the close of each class period beginning at the fourth-grade level, if facilities are available. As to the time necessary for efficient showering, 12 to 15 minutes is usually sufficient. However, this approximation can only be relative to the number of students in the class and the number of shower stalls available. Girls generally require a longer period of time to shower than boys, so this factor should also be considered. In grades 7-12, showering is an even more essential component of the physical education program. Gang-type showers for boys or girls with approximately two to five individual showers and dressing cubicles to meet certain individual needs are recommended. Tradition alone represents an untenable excuse for continuing with individual dressing booths when economy, sociability, sanitation, and the principles of social and mental hygiene favor gang showers.

Lockers

It is highly desirable from a health standpoint that every pupil be provided with a ventilated storage locker in which to keep his physical education class attire and a dressing locker in good repair in which he can safely keep his street clothes and *personal belongings during the physical education class period*. See Section 10-228, *General Statutes of Connecticut*, Vol. 11, 1973, p. 135.

Emergency Care Kits

Emergency care kits should be located in all gymnasium areas. If these kits are not in the area at present, immediate requisition should be made for them.

Emergency Care Kits for the Aquatics Program

First aid precautions should be taken to assure maximum protection to all users of the swimming pool. It is suggested that all swimming instructors should possess an American Red Cross First Aid Certificate. In addition, an adequate first aid kit should be available along with appropriate lifesaving equipment.

Textbooks and Resource Materials

It is recommended that classroom sets of "Physical Education for High School Students" or other appropriate tests be provided for the boys' department and the girls' department.

Reference materials, including pamphlets and bulletins, should be ordered from lists provided by the physical education department or from the school librarian. A list of films, filmstrips, and film loops, should be available in the library or media center.

Glossary

Accountability—A modern educational concept that has to do with results. It is the comparison of what was supposed to happen with what did happen. It further connotes the quality or state of being accountable.

Adapted Physical Education—A diversified program of developmental activities, games, sports, and rhythms suited to the interests, capacities, and limitations of students with disabilities who may not safely or successfully engage in unrestricted participation in various activities of the general physical education program.

Achievement Standards—Criteria for accomplishment based on such factors as age, weight, grade, or other classification index.

Affective Domain—Interest, attitudes, values, appreciations and adjustment of the individual. The affective behaviors emphasize the emotional processes, beginning with simple behavior of receiving, responding, valuing, organizing, and characterizing.

Agility—The ability to move the body or its parts in any direction quickly and easily.

Balance—The ability to assume and maintain any body position against the force of gravity.

Behavioral Objectives—Specific, unambiguous statements of desired learner performance. They specify what the learner is to say or do. They state what the teacher expects the student to be able to do.

Bilateral Movement—Those movements which involve the use of both sides of the body.

Body Image—The individual's concept of his body and its parts.

Cardiorespiratory Endurance—A basic component of physical fitness, the ability of the heart and lungs to maintain efficient function during and after vigorous exercise.

Circuit Training—The use of a series of stations that have designated exercises or activities which are designed to develop and maintain physical fitness.

Cognitive Domain—The mental processes. It includes knowledge, comprehension, application, analysis, synthesis, and evaluation.

Common Denominator—The many specific or basic concepts of movement which can be applied to movement tasks and sport skills.

Cooperative Evaluation—An evaluation in which the student, in company with his peers and teacher, can determine objectively the quality and quantity of his performance.

Coordination—The ability of the body to integrate the actions of the muscles of the body to accomplish in specific movement or a series of skilled movements in the most efficient manner.

Core activities—Those experiences which are required of all students.

Correctives—The means for remedying disabilities through individually planned exercise programs.

Course of Study—A description of the activities which are included in the program, arranged as sequential learning experiences from grade to grade.

Depth Perception—Spatial orientation involving the ability to perceive adequately and to judge accurately distances from both near and far.

Developmental—Refers to means used to increase exercise tolerance of the weak and ill through individually planned and progressively vigorous programs.

Directionality—An awareness of space outside of the body involving knowledge of directions in relation to right and left, in and out, and up and down.

Educable Mentally Retarded Children—Any such children who, at maturity, cannot be expected to attain a level of intellectual functioning greater than that commonly expected from a child of 12 years of age but who can be expected to attain a level of intellectual functioning greater than that of a seven-year-old child. See *General Statutes of Connecticut,* Vol. II. Section 10-76a(f), 1973, P. 221.

Elective Program—One in which the student is permitted a choice of activities. In this suggested program, he is permitted a choice within a required program.

EPDA Physical Education Program—One that is supported under the Education Professions Development Act.

Erogenic Aids—Nutritional, physical, and pharmacological agents that are supposed to increase the capacity of bodily and mental effort, especially by eliminating fatigue symptoms.

Exceptional Children—Those who deviate significantly from the norm, either physically, mentally, or emotionally.

Extramural—Within the context of physical education and recreation, *extramural* refers to a type of sports competition in which participants on teams representing two or more schools compete on the campus of one school.

Eye-Body Coordination—Has to do with the ability of the eyes and the total body to function together as a whole.

Eye Fixation—The ability of the eyes to converge together and to focus together on a point, and also to change the focus from one point to another. Sometimes referred to as eye coordination.

Eye-Foot Coordination—The ability to use one's eyes and a foot or feet together to accomplish a task.

Eye-Hand Coordination—The ability to use one's eyes and a hand or hands together to accomplish a task.

Facilities—Areas, structures, and fixtures essential to accommodate the program.

Fatigue—A condition that follows physical activity or emotional strain and which results in an accumulation or buildup of waste materials and fluids in the muscles of the body, such as lactic acid, carbon dioxide, and water.

Film-Loops—Short, silent, super-8-mm. cartridge motion pictures that run continuously.

Fine Motor Coordination—Development of the muscles to a degree resulting in the ability to perform specific small movements.

Flexibility—The ability to move a part or parts of the body in all directions without evidence of tightness of muscles.

Flow—Continuity of movement, connecting one part of the movement to the next smoothly, or connecting one movement to the next with no interruption.

Force—The strength that moves the body, the amount of strength or tension necessary or advisable to execute a given movement.

Gross Motor Coordination—Development of the skeletal muscles so as to produce efficient total body movement.

Guided Exploration—A child being creative and doing his "thing" but within a certain framework so that the teacher sets the task which is limiting at either end.

Gymnastics—Physical education activities using gymnasium apparatus.

Individualized Instruction—Programing and teaching the individual according to his developmental needs. Particularizing or adapting the program to the special needs or circumstances of the individual.

Interdisciplinary Approach—Two or more academic disciplines interacting and combining efforts to solve a task or problem.

Interval Training—A series of repeated efforts in movements which are executed vigorously at a timed pace and are alternated with measured recovery periods of lessened activity and energy output.

Intramural—Within the context of physical education and recreation, *intramural* refers to a type of competition in which all of the participants are identified with a particular school. All are encouraged to participate in some activity.

Interscholastic Athletics—Activities which offer enriched opportunities for the more highly skilled individuals to represent a school in competition with representatives from other schools and which involves season-long schedules, organized practices, league competition, and championships.

Kinesiology—The science that deals with the movement of the human body.

Kinesthesis—One's awareness of muscular movement and expenditure of energy as a skill is performed.

Laterality—Internalizing the awareness of the difference between right and left and how far right and how far left various activities are centered. The ability to control the two sides of the body together or separately. The motor basis for spatial concepts.

Lifetime Sports—Activities with carryover value for adult life.

Locomotor Movements—Basic movements performed while moving the body from place to place.

Manipulative Activity—An activity in which a child handles some kind of play object, usually with the hands, but which can involve the feet and other parts of the body.

Maturation—The process of becoming mature. Maturation occurs as a result of physiological changes which are produced naturally as age and experience increase.

Mimetics—Imitative and interpretive activities based on the actions of animals and the movement of machinery as found in the environment.

Modular Scheduling—Scheduling using modules or specific divisions of time, usually 15, 20, or 25 minutes in length.

Motor Readiness— The development of the neuromuscular systems to a degree that enables effective control and operation of the body.

Motor Skills—Skills needed for development of axial (non-locomotor) and locomotor movements, or combinations of both.

Movement Education—That part of the physical education program which emphasizes helping the child to learn about his unique movement behavior.

Movement Exploration—That method of teaching physical education which employs teacher guidance, pupil discovery, and problem solving.

Movement Memory—Being able to recall a movement sequence that was just performed and the way it was done and what part of the body came into play.

Movement Sense—The correlation of many experiences to apply when needed.

Movement Skills (both functional and expressive)—Functional movement is the everyday kind of movement like walking or running, or specific sport skills such as throwing, catching, or rolling. Expressive movement would be in terms of communication through movement, such as expressing an imagined feeling or idea in terms of dance.

Movement Theme—An idea upon which a lesson is developed. Sample themes may be stretching the body, flight, or balance. The teacher presents tasks to students based on the selection of the theme he or she wishes to use. Students then respond through appropriate movement.

Movement Vocabulary—Words used to describe movement of the body, such as stretching, curling, rolling, and the qualities of such movement, including fast, slow, light, and heavy. The child demonstrates understanding of these words through movement responses to tasks.

Muscular Endurance—The capacity of the muscles to continue strenuous activity without undue fatigue.

Natural Movements—Movements which are instinctive, automatic, and self-motivating.

Oppopsition in Movement—Maintenance of body balance by shifting the body weight and by moving the opposing arm and leg alternately in opposite directions.

Organic Efficiency—The degree of effectiveness in functioning of the vital organs.

Outdoor Education—A learning process taking place under leadership in natural surroundings which are in or about the outdoors.

Perception—The ability of an individual to attach meaning to objects, events or situations.

Perceptual Motor Skills—Skills which indicate the interrelationships between the perceptual or sensory processes and motor activity and the ability of the individual to receive, interpret, and respond to stimuli, either internal or external. Perceptual motor learning involves all senses—seeing, hearing, touching, tasting, smelling, and moving or kinesthesis.

Perceptual Training—Assisting children to explore and develop their body parts and coordination of head, arms, torso, and legs to gain greater eye freedom and skill of movement, balance, eye-hand coordination, eye movement, form perception, and visual memory.

Phrasing—A musical term used in rhythmic activity to denote a degree of completeness in composition and movement.

Physical Defects—Observable skeletal abnormalities.

Playdays—Days when pupils from two or more schools participate in one or more activities without retaining the identity of the school.

Physical Fitness—The degree to which the body can meet the physical demands for everyday living, as well as the ability to meet emergencies.

Psychomotor Domain—Muscular action believed to ensue from prior conscious mental activity and which requires neuro-muscular coordination. The action includes imitation, manipulation, precision, articulation, and naturalization.

Power—The capacity of muscles to move the entire body or any of its parts with explosive force. It is dependent on muscular strength and coordination.

Progression—Planned developmental activities arranged and taught in order of difficulty, from the simple to the complex.

Proprioception—Being consciously aware of the positioning of body segments, muscle tension, and visceral pressures.

Remedial Exercises—Exercises done for the specific purpose of correcting some abnormality.

Required Program—Those offerings or core activities that all students must take.

Rotate—To move from one activity or space to another in an orderly fashion.

Self-Image—The psychological concept of how a person perceives himself as a person. It is his own appraisal of his personal worth and value.

Self-Testing—Activities in which children can measure their own achievement, such as hitting a target with a ball, or measuring their own progress.

Social-Emotional Development—An individual's interaction with others and the feelings involved.

Spatial Orientation—The ability to select a reference point to stabilize functions and to organize objects into correct perspective. It involves knowledge of the body and its position, as well as the positions of other people and objects in relation to one's body in space.

Special Physical Education—Specialized programs of physical activities for the handicapped.

Stamina—The ability to continue activity at more than normal speed, with quick recovery upon the halting of the activity. Similar to cardiorespiratory endurance.

Stress—The emotional, mental and physical pressure, pull, or other force exerted upon one person or thing by another person or thing.

Sustained Movements—Motor skills executed consecutively for a number of times or continued for an interval of time.

Symmetrical Body Control—The use of bilateral movements, evidenced by pupils using both arms and legs together or all of the body in such activities as skipping and rope jumping.

Taxonomy—The orderly classification of things according to their natural relationship. A study of the general principles of scientific classification.

Tort Liability—A wrongful act, other than a crime or breach of contract, whereby another received injury in person, property and/or reputation. A tort may arise in three ways: (1) act in which one intentionally harms another, (2) act which is contrary to law, (3) an act of unintentional injury.

Tracking—The visual ability to follow the path of a moving object through space.

Trainable Mentally Retarded—Those pupils who, because of retarded intellectual development as determined by individual psychological examination, are incapable of being educated through ordinary classroom instruction but may be expected to benefit from special education.

Varsity—A selection of the most highly skilled players to represent the school in interschool games.

Visual Discrimination—The ability to visually distinguish between objects by their peculiar features.

Appendices

- Laws Relating to Physical Education
- Some Outstanding Programs
- Selected References
- Movement Analysis Based on Gymnastics
- Physical Fitness Tests
- Basic Equipment and Supplies

Appendix A

Laws Relating to Physical Education

Duties of Local Boards

Sec. 10-15. Towns to maintain schools. Prescribed courses of study. Public schools including kindergartens shall be maintained in each town for at least one hundred eighty days of actual school sessions during each year. When public school sessions are cancelled for reasons of inclement weather or otherwise, the rescheduled sessions shall not be held on Saturday or Sunday. The state board of education may authorize the shortening of any school year on account of an unavoidable emergency. The public schools shall be open to all children over five years of age without discrimination on account of race or color; provided town boards of education may, by vote at a meeting duly called, admit to any school children under five years until after the first day of January of any school year. In said schools shall be taught, by teachers legally qualified, reading; spelling; writing; English grammar; geography; arithmetic; United States, state and local history; the duties of citizenship, which shall include a study of the town, state, and federal governments; hygiene; the effects of alcohol, nicotine or tobacco and of controlled drugs, as defined in section 19-443, on health, character, citizenship and personality; physical and health education, including methods, as presented by the state board of education, to be employed in preventing and correcting bodily deficiency; instruction in the humane treatment and protection of animals and birds and their economic importance, such instruction, when practicable, to be correlated with work in reading, language and nature study; and such other subjects as may be prescribed by the board of education. Courses in health instruction and physical education shall be prepared by the secretary of the state board of education and, when approved by the state board of education, shall constitute the prescribed courses.

Commissioner of Education's Interpretation of Section 10-15

Circular Letter No. C-11, Series 1970-71, dated February 4, 1971: "Clearly, the purpose of this law is to mandate the design and adoption of local programs that will be required of all students. The intent of the State Board of Education is that every boy and girl will participate in a planned, sequential physical education program and health education program throughout his or her school experience, kindergarten through twelfth grade."

Sec. 10-221. Boards of education to prescribe rules. Boards of education shall prescribe rules for the management, studies, classification and discipline of the public schools and, subject to the control of the state board of education, the textbooks to be used; shall make rules for the arrangement, use and safe-keeping, within their respective jurisdictions, of the school libraries and approve the books selected therefor and shall approve plans for schoolhouses and superintend any high or graded school in the manner specified in this title.

Board of Education is agent of the state and not of the town in maintenance and management of public schools.

Sec. 10-228. Free textbooks, supplies, materials and equipment. The board of education of each school district shall purchase such books, either as regular texts, as supplementary books or as library books, and such supplies, materials and equipment as it deems necessary to meet the needs of instruction in the schools of the district. In day and evening schools of elementary and secondary grades, all books and equipment shall be loaned and materials and supplies furnished to all pupils free of charge, subject to such rules and regulations as to their care and use as the board of education prescribes.

Sec. 10-235. Protection of teachers, employees and board and commission members in damage suits. Each board of education shall protect and save harmless any member of such board or any teacher or other employee thereof or any member of its supervisory or administrative staff, and the state board of education, the commission for higher education, the board of trustees of each state institution and each state agency which employs any teacher, and the managing board of any public school, as defined in section 10-161, shall protect and save harmless any member of such board or commission, or any teacher or other employee thereof or any member of its supervisory or administrative staff employed by it, from financial loss and expense, including legal fees and costs, if any, arising out of any claim, demand, suit, or judgment by reason of alleged negligence or other act resulting in accidental bodily injury to or death of any person, or in accidental damage to or destruction of property, within or without the school building, or any other acts resulting in any injury, which acts are not wanton, reckless, or malicious, provided such teacher, member or employee, at the time of the acts resulting in such injury, damage or destruction, was acting in the discharge of his duties within the scope of his employment or under the directions of such board of education, the commission for higher education, board of trustees, state agency, department or managing board. For the purposes of this section, the terms "teacher" and "other employee" shall include any student teacher doing practice teaching under the direction of a teacher employed by a town board of education or by the state board of education or commission for higher education, any volunteer approved by a board of education to carry out a duty prescribed by said board and under the direction of a certified staff member and any member of the faculty or staff or any student employed by the University of Connecticut health center or health services.

Sec. 10-206. Health Examinations. Board of education shall require each pupil enrolled in the public schools to have a health examination either by a legally qualified practitioner of medicine or by the school medical advisor at least once in each three-year interval to ascertain whether such pupil is suffering from any physical disability tending to prevent him from receiving the full benefit of school work and to ascertain whether such school work should be modified in order to prevent injury to the pupil or to secure for the pupil the best educational results, provided no physical examination shall be made of any female child in attendance at any public school unless such examination is made by a woman physician, or unless, after notice to the parent or guardian of such child, and a reasonable opportunity to be present at such examination having been given, such examination is made in the presence of such parent or guardian or of a female nurse employed in such school or of a female school employee specifically assigned by the principal or superintendent of schools. The result of the examinations so made shall be recorded on forms supplied by the board of education, providing for a cumulative health record of each pupil. Such record or a true copy thereof shall be kept on file in the school the pupil attends.

When a pupil moves to another town, his cumulative health record or a true copy thereof shall be sent to the superintendent of schools of the town to which he moves. Each physician making examinations of pupils shall sign each form containing the record of an examination made by him and shall make his recommendations concerning the pupil in writing.

Sec. 10-209. Records not to be public. No record of any medical examination made or filed under the provisions of sections 10-205 to 10-207, inclusive, or any psychological examination made under the supervision or at the request of a board of education, shall be open to public inspection.

Buildings for Disabled Persons

Sec. 19-395a. Standards for construction of public buildings to accommodate disabled persons. (a) The public works commissioner shall make and adopt and amend, or adopt by reference, regulations or codes, including codes established by the American Standards Association, concerning the design and construction of public buildings and such rules, regulations or codes shall prescribe minimum standards concerning safe and accessible means of entrance and egress and ease of access and of use of facilities adequate to meet the needs of people having disabilities rendering them nonambulatory or semi-ambulatory, sight disabilities, hearing disabilities and disabilities causing lack of coordination and other disabilities or limitations resulting from aging, illness or injury. The regulations, codes and standards established by authority of this section shall be consistent with generally accepted architectural and engineering standards and practices and shall reasonably and fairly recognize the need for full utilization of space function and facility by the general public. (b) Regulations or codes made or amended by authority of sections 19-395a to 19-395c, inclusive, shall, after a public hearing called for that purpose by the public works commissioner not less than thirty days before the date of such hearing, be filed by the commissioner with the secretary of the state in accordance with the provisions of sections 4-44 and 4-46 and he shall thereafter make copies available to persons having an interest therein. (c) If any regulation shall be set aside by a court of competent jurisdiction, such ruling shall affect only the regulation, standard or specification included in the ruling and all other regulations, standards or specifications shall remain in effect.

Sec. 19-395b. Construction contracts. Modification of standards. Standards and specifications prescribed by the regulations authorized by section 19-395a shall apply to all buildings and facilities constructed, remodeled or repaired by the state or its agents or by any political subdivision of the state or its agents when state funds or state interest is involved. Each contract for construction, remodeling or repair negotiated by the state or its agents or such political subdivision or its agents shall contain the standards and specifications established by the regulations herein authorized and each such standard and specification shall be a contract provision, requiring full compliance before the contract may be deemed satisfactorily completed and payment authorized. To prevent undue hardship the department or agency responsible for the construction, alteration or repair may, after investigation and consideration of all circumstances and with the approval of the public works commissioner, set aside or modify any particular standard or specification when it is determined that it is impractical and would work an unusual hardship or unreasonably complicate the construction, alteration or repair in question. The department or agency or authorized representative thereof shall be responsible for and authorized to enforce the regulations established hereunder with respect to all contracts under its jurisdiction and supervision.

The following standards shall apply, as provided by Sections 19-395a to 19-395b, inclusive, of the 1965 Supplement to the General Statutes, to all buildings and facilities constructed, remodeled or repaired by the state or its agents or by any political subdivision of the state or its agents when state funds or state interest is involved. In accomplishing the intent and purpose of these standards, reference is made to the Standard Specifications A117.1-1961 prepared and approved October 31, 1961 by the American Standards Association.

(a) *Grading*—The grading of ground shall be such that it attains a level with a normal entrance or a gradient ramp thereto, and makes the facility accessibile to individuals with physical disabilities.

(b) *Ramps with Gradients*—Where ramps with gradients are necessary or desired, they shall conform to the following specifications:

> Ramps shall not have a slope greater than one foot rise in twelve feet, or 8 and thirty-three one hundredths percent, or four degrees fifty minutes.

(c) *Entrances*—At least one primary entrance to each building shall be usable by individuals in wheelchairs, avoiding abrupt changes in levels and with thresholds flush with the floor.

At least one entrance usable by individuals in wheelchairs shall be on a level which shall make the elevators accessible.

(d) *Doors and Doorways*—Doors shall have a clear opening of not less than thirty-two inches when open and shall be operable by a single effort.

(e) *Toilet Rooms*—An appropriate number of toilet rooms, in accordance with the nature and use of a specific building or facility, shall be made accessible to and usable by the physically handicapped. Such toilet rooms shall have space to allow traffic of individuals in wheelchairs. A space of approximately 60″ x 60″ is required for turning. Each toilet room shall have at least one toilet stall which is or has:

> (1) Three feet wide
>
> (2) At least four feet eight inches, preferably five feet deep
>
> (3) A door, where doors are used, which is thirty-two inches wide and swings out, and
>
> (4) *Handrails* on each side, thirty-three inches high and parallel to the floor, one and one-half inches in outside diameter, with one and one-half inches clearance between rail and wall, and fastened securely at ends and center.

(f) *Elevators*—In a multiple-story building, elevators are essential to the successful functioning of physically disabled individuals. They shall conform to the following requirements:

> Elevators shall be accessible to, and usable by, the physically disabled on the level which they use to enter the building, and at all levels normally used by the general public.

(g) *Controls*—switches and controls for light, heat, ventilation, elevators, windows, draperies, fire alarms, and similar controls of frequent essential use, shall be placed within the reach of individuals in wheelchairs.

(h) *Parking*—Where parking facilites are provided suitable parking spaces shall be provided and so identified for the use of the physically handicapped.

(i) *Public Telephones*—If public telephones are provided in the building, an appropriate number shall be made accessible to and usable by the physically handicapped.

(j) *Warning Signals*—Audible warning signals shall be accompanied by simultaneous visible signals for the benefit of those with hearing disabilities.

Appendix B

Certification Requirements for Physical Education

Sec. 10-146-21. When required. Endorsements. The certificate for special subjects or fields is required for the following special subjects taught at either or both the elementary and secondary levels: Agriculture (non-vocational), art, health, homemaking, industrial arts, library, music, and physical education. Special subjects certificates may be endorsed for grades one through twelve, one through eight, or seven through twelve; they may be endorsed for one or more elementary levels or for one or more secondary subjects.

Note: This section is interpreted as permitting endorsement of a special subjects certificate for special education. Refer to Sec. 10-146-13 for conditions for additional endorsement.

Sec. 10-146-22. Provisional certificate. To receive a provisional certificate for a special subject or field, an applicant shall present evidence of meeting the following requirements in addition to meeting the general conditions.

(a) Hold a bachelor's degree from an institution approved for the preparation of special subjects teachers in the field in which certification is requested.

(b) Have a minimum of forty semester hours' credit in general education, including study in at least three of the following areas in addition to the area of major specialization; in the areas marked * six semester hours are required:

*(1) English
(2) Science
(3) Mathematics
*(4) Social sciences, including United States History
(5) Fine arts
(6) Foreign Languages

When an applicant presents a planned program of preparation from an approved institution, including the required practice teaching, but lacks course requirements in general or professional education or the teaching field to the extent of not more than six semester hours, he may, if otherwise qualified, be issued a provisional certificate valid for one year.

Such one-year certificates may be renewed for an additional four-year period on evidence, in the form of official transcripts, of removal of the deficiency. Further renewal shall be subject to all conditions for renewal of provisional certificates.

Failure to remove the deficiency within the one-year period of the initial provisional certificate shall terminate the right of the holder to serve in a public school position covered by the expired endorsement.

(c) Have a minimum of eighteen semester hours credit in professional education involving a planned pattern of study and experience appropriate to teaching at both the elementary and secondary level and to the special subject for which certification is sought in the following areas; area marked ● are required:

● (1) *Foundations of Education*. This group includes such areas as: (A) history of education, (B) principles of education, (C) philosophy of education, (D) comparative education, and (E) community sociology, community resources, social anthropology.

● (2) *Educational psychology*. This group includes such areas as: (A) psychology of learning, (B) human growth and development, (C) child-adolescent psychology, and (D) mental hygiene.

● (3) *Curriculum and methods of teaching*. This group includes such areas as: (A) methods of teaching, (B) teaching of reading, (C) audio-visual aids in education, (D) individualizing instruction, (E) educational measurements, (F) principles of curriculum construction, (G) the curriculum at a particular level, (H) the curriculum in one specific field and (I) extra-curricular activities.

● (4) *Supervised observation, participation, and full-time responsible student teaching* totaling at least six but not more than twelve semester hours' credit as part of this requirement. One year of successful experience teaching the special subject in a public school or an approved private school, as attested in writing by an employer, may be accepted as ground for waiving the inclusion of this phase of the professional preparation.

(5) *Guidance*

(6) *Health and Safety Education*

(d) Have a minimum of thirty-five semester hours' credit in appropriate technical courses in a planned program designed to develop competency in the special field to be taught and including the particular areas as noted for each subject.

● ● ●

Physical Education

History, philosophy and principles of physical education. A core of applied sciences basic to movement, e.g., anatomy, physiology and exercise, kinesiology, adaptive exercises, or corrective physical education.

Methods, materials, and techniques of physical education, grades 1-12. (Required service courses for all students in college not acceptable.)

Organization and administration of physical education programs. (Coaches of school teams engaging in interscholastic and intramural athletics must hold some type of valid certificate.)

Sec. 10-146-23. Standard certificate. To receive a standard certificate for a special subject or field a teacher shall hold a provisional special subject or field certificate or its equivalent and shall present evidence of meeting the following requirements: (a) completion of three years of successful teaching under the provisional certificate and (b) completion of a master's degree or a planned program at an approved institution which shall consist of at least thirty semester hours' credit beyond the bachelor's degree, which may be graduate or undergraduate credit, and which should include at least fifteen semester hours' credit in general education in addition to the credits offered for the requirements for the provisional certificate. Exceptions to the requirement for fifteen hours in general education may be recognized when the preparing institution or the bureau of teacher certification determines that the applicant has in his combined program of undergraduate and post-baccalaureate preparation met this requirement.

Appendix C

Innovative Approaches Used in Teaching Secondary School Physical Education[1]

By Carolyn L. Stanhope

Instructor in Physical Education,
Timberlane Regional High School,
Plaistow, New Hampshire

Recognizing that secondary school students are well on their way toward becoming self-reliant, responsible adults, capable of choosing skills and activities in which they are interested and could better learn at a pace determined by their individual learning speeds and abilities, Timberlane Regional High School in Plaistow, New Hampshire, offers an independent study option to upperclassmen to satisfy their physical education requirement. The school also recognizes the crucial need for secondary school students to develop recreational skills of lasting value.

The traditional physical education program seldom develops an intrinsic awareness of physical exercise and its role in adult life. Even those graduates somewhat knowledgeable in a variety of activities fail to participate after leaving the school situation, with its ready facilities, handy equipment, dependable team members, and assured recreative time. Independent study in physical education has the potential for developing the needed awareness. It has proved successful in exposing students to the realization that each individual is capable of creating and developing avenues of physical recreation of lasting value.

Timberlane has found that many factors influence student decisions to enter the independent study program. The obvious novelty factor is important, as well as the opportunity to freely choose an activity area and the chance to rely completely on one's sense of responsibility to carry out an established goal. Young people like the feeling of working largely without adult supervision.

---

[1] Reprinted with permission from *Journal for Health, Physical Education, and Recreation,* April 1971.

New activities are explored by some. Others prefer to improve their performance and understanding of activities to which they have already been exposed. Almost any activity area is acceptable as long as three requirements are met:

1—The student must have genuine interest in the activity.

2—The activity must have realistic carry-over value.

3—Participation in the activity must provide an opportunity for a goal-centered learning experience.

The possibilities, then, are numerous and extend far beyond what any physical education formal curriculum, no matter how extensive, could feasibly offer.

Students participate in an activity either by themselves or in small groups, depending largely on the nature of the activity. They are encouraged to take advantage of local recreation facilities and their staffs and to communicate and work with knowledgeable and skilled people in both the school and the community. They are provided assistance in obtaining and using reference materials for developing a learning program best suited to achieve their self-established goals.

Students meet with a faculty adviser each week to evaluate their progress with some direction. They then establish new objectives to enhance goal attainment.

The independent study program at Timberlane Regional High School has made physical education relevant. It has provided valuable experiences for both students and teachers, opening the doors of creative movement in its largest sense. The program has also demonstrated that students can better evaluate their own achievement in terms of their own capabilities and relative success than can anyone else. High school students want to learn, want to improve and want the opportunity to demonstrate self-responsibility. An independent study program allows them to prove this.

Flexible Modular Scheduling Allows For Student Choice of Independent Study Units

By Gregory M. Sadowski

Instructor in Physical Education,
Ridgewood High School,
Norridge, Illinois

The Ridgewood High School in Norridge, Illinois, uses flexible modular scheduling. The school day consists of 20 20-minute modules. Classes vary from one to five modules, depending on the purpose. The school is also on a six-day cycle. It does not operate by days of the week, but by day one, two, three, etc.

In physical education, each year level meets for three mods per day, four days per cycle. To make maximum use of time and gym space, physical education classes are scheduled to overlap for one mod. For example, class A meets 10:00 to 11:00, class B from 10:40 to 11:40. Class A reports on the floor at 10:10 and is dismissed at 10:50. The first and last 10 minutes are spent changing. Class B is in the locker room from 10:40 to 10:50, and takes the place of class A on the floor at 10:50.

Each year level also has a two-module large group meeting once every cycle. The large group (about 250 students) meets in the auditorium, and the time is used for lectures to expose students to basic concepts, often bringing in guest speakers from the community, and for written testing.

A new and exciting facet of the physical education program is the phase called PEIS (Physical Education Independent Study). All junior and senior high school boys and girls take PEIS. Six units are available during the school year—two outdoor project areas, one in the fall and the other in the spring, with four indoor projects between them. Each student selects a project of his choice for the particular unit.

Projects currently offered at Ridgewood are adaptive activities, apparatus, archery, badminton, baseball, basketball, bowling, camping skills, cheerleading, exercise program, fencing, first aid, football, golf, indoor recreation, judo, leaders, modern dance, outdoor recreation, personal defense, pom pom, soccer, softball, tennis, therapy, track and field, trampoline, tumbling, volleyball, weight training, wrestling, and yoga.

Each student selects a project and then makes up his own unit, completing a special project sheet. This sheet sets forth the student's goals and objectives, the procedures he will follow, safety rules to be observed, and the references to be used to complete the project. The sheet may be approved by any of the teachers in the physical education department (which utilizes a team teaching structure). There are two restrictions: (1) the student cannot repeat a project and (2) he may not take two team sports in succession. The project sheet is kept on file in the department's resource area, where there are film loops and books for reference.

When the student's project has been approved, he may work on his project on his own and is encouraged to get help from an instructor. Generally, for PEIS there are two or sometimes three instructors per class. Students may stay and work at their projects if they have at least three mods of unscheduled time in their schedule which coincides with the PEIS schedule. In PEIS, all classes start on the even mods.

A student is graded by a written and skills test in his project. When it comes time for quarter grading, the entire physical education teaching team evaluates him.

The program at Ridgewood High School is geared to enable the student to enjoy an activity and not be forced into it. The student makes his own choice and, because of that, he works harder and tries to get as much out of the project as possible. Students learn to structure themselves and to become active. The physical education department has high hopes that this approach will make for a definite carryover in physical education after graduation and that the training so received will become an important part of student lives.

Self-Directed Learning

By Patricia L. Geadelmann

Instructor in Physical Education,
Eagle Grove High School
Eagle Grove, Iowa

Abandoning the traditional, authoritarian approach to teaching skills, the physical education department at Eagle Grove High School in Eagle Grove, Iowa, gave full responsibility for the determination of their gymnastics unit structure to the girls themselves. On the first day of the gymnastics unit four possible teaching approaches were presented: (1) working as a single unit, with the entire class progressing together from skill to skill, piece of apparatus to piece of apparatus, as directed by the teacher, (2) working in squads, rotating among the apparatus to learn prescribed skills, (3) working individually to meet skill requirements for a particular letter grade, or (4) working independently on individually determined goals. All six girls' physical education classes selected the fourth approach. The classes ranged in size from 29 to 36; combined grades 10, 11, 12; and met daily for periods of 53 minutes. The unit lasted three weeks.

During the next three class periods, each girl determined her present skills on each piece of apparatus on prepared sheets listing all the various skills. This constituted a record of accomplishment plus an incentive for learning new skills.

On the fourth day, each girl decided her goals for the end of the unit and wrote them on a sheet prepared for this purpose. Guidelines, established to aid students in developing to their fullest in as many ways as possible, were: (1) two skills on a piece of apparatus students wre afraid of or especially weak in, (2) a routine on a piece of apparatus the student liked best of all, including some new skills, and (3) three other new skills on additional pieces of apparatus, or tumbling. Each student was encouraged to go as far beyond her existing level of skill as possible, even beyond the goals set.

Once all goals were recorded, it was the individual student's responsibility to reach her goals by the end of the unit, utilizing all available resources. Students were encouraged to learn the new skills any way they possibly could. Resources available included: (1) 32 super-8 loop films, (2) books from the school library and the instructor's personal library, (3) mimeographed material, (4) other students in the class, and (5) the instructor.

Safety was stressed at the beginning of the unit, and students were required to have a partner and spotters when actually working on skills. The students enjoyed the opportunity to work independently, but they found that they could be of tremendous help to each other.

Students completed a self-evaluation form at the end of the unit. Their response was very favorable. They clearly enjoyed the opportunity to share in decision-making and to accept responsibility.

The majority made good use of all classtime available. It was a thrilling experience for the teacher to watch the variety of work going on simultaneously. The students made excellent use of the resources. Classmates and loop films were most often mentioned as helpful, in addition to the students' own experimentation. The help students gave each other in patience, encouragement, and suggestions was a most important factor in the success of the unit. With each other, the students were more relaxed and free—not pressured in the least.

A comment by a senior girl was revealing: "A girl that knew how it felt to do a headstand was able to teach me. I always knew the steps you were supposed to go through, but being told how it felt made all the difference."

Another student wrote: "Although I met few of my goals, I got a lot out of this course. Now I enjoy gymnastics, whereas before I hated it. And I have improved very much in the past two weeks over what I could ever do before."

When the girls completed their end-of-the-year evaluations of the physical education program, many referred to the gymnastics program and rated it high for enjoyment and learning. This pilot experience in "letting them do it their way" confirms the desirability of planning programs so that students have a share in the decisionmaking process and accept responsibility for decisions made as well as for their own learning.

Goal-Centered Individualized Learning

By Sandra Driscoll and Doris A. Mathieson

Instructors in Physical Education,
Framingham North High School
Framingham, Massachusetts

Students learn more when they take an active role in deciding what it is they are going to learn and how they would like to learn. Two physical education staff members at Framingham North High School, Framingham, Massachusetts, put this concept to work successfully in their approach to gymnastics.

The first task was to determine a way for students to make decisions about what they wanted to learn and still have time to do that learning. Students spent several days in the process of goal-setting. The class discussed criteria for goal-setting (as previously formulated by the teachers), studied four general phases of gymnastics (ranging from development of a controlled body to competition), and read an informative paper outlining the five steps involved in goal-setting —(1) know yourself, know and understand the environment for yourself, (2) know and understand the environment for learning (details of facilities, equipment, and resources available), (3) select a specific objective, (4) plan the steps needed to reach the stated goal, and (5) make a commitment to learning and improvement.

Each student then had three days in which to think through the procedure, make her decision, and put her goals in writing. To establish goal-setting as a personal and cognitive process, the students were given the following handout to help facilitate goal-setting:

> **1**—Take a good long look at yourself and decide who you are and what you are. Who am I? How do I look? How do I want to look? How much courage do I have? Am I self-disciplined? Can I take responsibility for my own achievement? Have I any fears? What do I need? Am I a mover? What is my potential? Where do I stand now in relation to gymnastics.
>
> **2**—Decide what it is you want. Do I want the satisfaction of really achieving? Do I want to improve my physical image? Do I want to know myself better? Do I want to pass to a higher level of gymnastics achievement? Are there some gymnastics areas I prefer over others? Are there some particular stunts I would like to be able to do?

3—Define your goals for yourself. The instructor is there to assist you. Write a short concise statement or outline defining and stating what your goal or goals will be.

4—Plan how you will meet your goals. How much time do I have? How much work am I willing to do? How can I best use the resources at my disposal in the time I have to learn? How much commitment do I have to my own learning? What will my plan of attack be for each period, each week, the entire time?

5—Plan to evaluate the work you are doing. Am I learning and achieving? Is my work schedule adequate? Am I ready to move on to a new goal?

Class procedure, new and flexible, was explained carefully. Students arrived for class and addressed themselves to one or more of the following possibilities:

(1) Solving the "Can You?" problems. "Can You?" charts were posted on each piece of equipment and floor exercise space. They were to stimulate more interest in what it was possible to do in each area—e.g., "Can you do three different forward rolls, a cartwheel, a split?"

(2) Working to meet the goals they had set for themselves.

(3) Attending the teaching lesson. A lesson was planned and taught by a teacher each period. The content was posted in advance—e.g., Tuesday and Thursday a beginner lesson will be taught on the balance beam involving walks, runs, turns, mounts, dismounts.

(4) Halfway through the unit, charts were posted to stimulate students into further increasing their skills. There were clubs that could be joined if students fulfilled the requirements on the chart.

The last eight minutes of classtime were allowed for attendance and dressing. Each student took a card and wrote a short statement about her goal for the day and how she would rate her progress. She signed the card and handed it to her regular physical education instructor. It was the student's responsibility to make certain this was done so the staff would know she had attended class.

After several lessons, the teachers reviewed the cards and picked out students who seemed to be having difficulty with setting or achieving goals. They also looked around during the class to pinpoint those who were having trouble deciding what to do about their goals. One advantage of this method is that it allows the teacher time to check in with students, help someone in trouble, watch for safety hazards, and be more available for teachable moments.

Grading—required by the school—was a cooperative venture. Students were helped to understand that a grade indicates not the end of learning but the evaluation of achievement as a prerequisite for new goal-setting.

Two pieces of equipment were graded each week. The dates were posted in advance so that students could plan with direction. They first wrote down their overall goals for their grade and then determined a numerical grade for themselves based on their own evaluation. When each student was ready for instructor evaluation, she gave the teacher her card and then demonstrated her ability. The teacher evaluated the performance in relation to the student's goal and added her grade to the card. The student and teacher grades were averaged together equally for the final grade.

Near the end of the program, an evaluation sheet for the entire gymnastics unit was completed by all students. They seemed eager to let the teachers know how they felt about goal-centered learning. They ended up with some positive feelings about gymnastics. And most of them had a clearer image of what their bodies were capable of doing. It also became evident that many did not know how to use the material or teacher resources effectively and that self-evaluation was a hard thing to do. It was interesting to note that very few thought physical education should be done away with, although a few wished gym was not required. Answers to the question that asked student to check the phrase that best described them were revealing. Of 287 girls, 87 checked "overcame fear"; 85 chose "less tense"; 69 considered themselves a "mover," while 30 rated themselves "lazy." Only 16 said, "I hate gym no matter what it was."

The teachers felt good about the entire program. There were problems, but nothing that could not be solved with a little more planning. Students were so oriented to the command method which allows only one resource—the teacher—that they have to be taught how to use other resources. A variety must be available—such as closed-circuit TV, loop films, polaroid pictures, books, and charts.

Some students also need to be helped with their negative self-images. They are defeated before they start, by past negative experiences, overweight, or lack of self-confidence. Time needs to be set apart especially for these students.

Student Evaluation Sheet

Sample Questions

1—I often felt (happy, mad, indifferent) during gymnastics class.

2—I usually found it (easy, hard, no opinion) to set my goals for each lesson.

3—My general feeling about the unit has been (good, bad, indifferent).

4—I usually found it (easier, harder) to learn what I wanted to learn in gymnastics with this system.

5—My own attitude toward gymnastics (improved, didn't improve, went down).

6—I now think I have (a fairly complete, an incomplete) understanding of how to set a goal.

7—I now feel that I (do, do not) know the physical condition of my body.

Teachers themselves discovered they needed to learn how to teach under the conditions of freedom and movement. They found it easier to fall back into a command method or to stand around and not get involved in what was happening. Since one of the teachers taught a lesson each day, this helped the transition. But occasionally they had to accept the hard fact that no one wanted to come to the lesson.

The biggest problem centered around evaluation. Students need better guidelines for self-evaluation. Teachers need to learn not to use grades as threats. It is an important matter to be worked out and planned for at the beginning of the learning experience.

The teachers involved in the Framingham goal-centered gymnastics unit summarized it by saying: "We feel we have gotten over the age-old excuse of 'not enough time, not enough space, and too many students.' It is possible to center learning on the student and her individual goals."

An Elective Curriculum with Day-to-Day Choices

By Lois J. McDonald

Instructor in Physical Education,
Adlai E. Stevenson High School
Livonia, Michigan

The girls physical education curriculum at Stevenson High School in Livonia, Michigan, is designed to be so challenging through progressively planned sport and skill areas that it becomes its own reward to the individual. The elective curriculum allows the student to choose, not only the sport which interests her, but the skills within the sport elected.

Motivating the student is the prime ingredient and the key to accomplishing all the goals of the program. It puts the learner in a positive frame of mind to want to exercise, to desire to play, to behave as a good sport, and to discipline mental processes.

The program began with one teacher who could no longer justify to herself why she was doing certain traditional things: "Why take time and effort to teach each girl the breaststroke?" "Why not let the student pick and choose how she would earn credits toward a grade from an acceptable list of skills?" Accordingly, she made out a list of strokes, distance swims, dives, and written tests from which each girl could choose. The students swam more strokes and more distances than they ever had under the set pattern. It was exciting to watch the students assume responsibility for deciding how to earn their credits. The teacher had more time to teach when she did not have to spend time explaining and justifying why they should do this and that.

Following the success with the swimming unit, the entire staff accepted the new procedure. Together they rewrote materials for each sport so that the students would first be introduced to the sport and then would have the choice of how they would earn their credits. Teachers studied the literature carefully before coming up with their own elective sheets, lesson plans, instructor guidelines, and marking period schedules. The format now used at Livonia consists of introductory units, followed by day-to-day choices by each student for participating in the area of her interest.

The school year is divided into two semesters, with three six-week marking periods in each. During each marking period, three different activities are covered.

First Semester	**Second Semester**
1st Six Weeks	*1st Six Weeks*
Tennis	Health
Field Hockey	Modern Dance
Self-Testing No. 1	Gymnastics
2nd Six Weeks	*2nd Six Weeks*
Basketball	Health
Folk and Square Dance	Modern Dance
Swimming	Gymnastics
3rd Six Weeks	*3rd Six Weeks*
Basketball	Softball
Folk and Square Dance	Track and Field
Swimming	Self-Testing No. 2

The girls are ability grouped in the first semester for swimming activities. During the second semester, they are grouped for ability in gymnastics. For the ability grouping, each girl receives a low skill, medium skill, or high skill rank. The classes are divided in half as nearly as possible by putting the medium skill girls who have little self-discipline (forget gym suits, have difficulty in making decisions) or are slow learners in with the low skill group. This group proceeds at a slower pace. The remaining medium skill group is combined with the high skill group and usually can adapt to a faster pace.

During the first six weeks, the girls cover tennis, field hockey, and self-testing No. 1. During the second marking period, the low skill group has swimming and the better skilled have week-long introductory units in basketball and dance, followed by elective days in one or both of these skills. During the third marking period, the groups are reversed. The low skill swimmers who did not fulfill school swimming standards remain in the swim classes until they do pass.

The staff tries to "sell" a sport or skill area in a one-week introductory unit. A second activity is presented the next week. During the remaining weeks of the marking period, the students may choose *each day* whether they will participate in sport No. 1 or sport No. 2. They may specialize in one sport the whole time.

During the introductory week, the teachers teach the three skills which enable a student to play the game. The purpose is to put the students into the game situation before the end of the introductory week. Game organization and rules are simplified to do this. The girls can get going in field hockey with just hitting, dribbling, and receiving. They can play basketball with just dribbling, passing, and shooting.

Credits are also earned by performance of the specific skills taught, by playing ability, and by written tests.

Credits are awarded as follows:

2 Standard performances = ¼ credit
3 Quality performances = ½ credit
4 Standard performances = ½ credit
5 Standard performances = ¾ credit
5 Quality performances = 1 credit
Officiating = ¼ credit
Standard participation = ¼ credit
Quality participation = ½ credit

Standard is equivalent to success (a high D grade through B). Quality performance is the real challenge. There are no failures marked. Students succeed or try again. Standard performance is within reach of all students. Most will have to practice. A quality performance is top notch. Most won't reach it. These evaluations are all established and made by the teachers.

For each of the activities covered, sheets are prepared which outline how credits are earned. All of the team sports elective sheets follow the same format, as shown in the basketball sample. The working sheets for other activities take slightly different form, as shown in the required swimming sample.

Grades are based on the following:

A = 1½ credits
B = 1¼ credits
C = 1 credit
D = ½ credit

The elective program at Stevenson High School is flexible enough to meet the needs of each particular student. The teaching staff concentrates on organizing methods of presentation and researching new techniques. They look on their program as "coaching a class." And they coach every member of the class to be a success to herself. Their evaluation to date is: "We are on our way in a stimulating curriculum, but the doors have just opened."

Sample Sheet Showing How Credits Are Earned

Basketball Elective

	Standard Performance	*Quality Performance*
Area 1: Rules Test	Pass with 70%	Pass with 80%
Area 2: Participation	7 days practice, 1 of which is full court	11 days practice, 1 of which is full court
Area 3: Shooting		
1—Short shots, any technique	6 baskets in 30 sec.	10 baskets in 30 sec.
2—Free throws, any technique	1 out of 4	2 out of 4
Area 4: Passing		
1—Chest pass to target (1 block in wall, chest high), 10′ from wall	5 accurate passes in 10 seconds	8 accurate passes in 10 seconds
2—Two-hand overhead throw to wall and catch from 5′ restraining line (no batting)	8 passes in 10 seconds	12 passes in 10 sec.
Area 5: Dribbling Dribble alternately around 4 markers placed 8′ apart and start to first marker is 5′ start to fourth marker is 45′	14.0 seconds	12.1 seconds
Area 6: Playing ability	Instructor rated	
Area 7: Officiating 1—Pass rules test with 90% 2—Officiate tests 3—Officiate 4 days, 1 of which is an official game 4—Instructor's recommendation		

Required Swimming—Beginner and Intermediate

	Standard Performance	*Quality Performance*
Area 1: Front crawl Coordinated stroke Rhythmic breathing on alternate sides for at least 2 lengths	4 lengths	10 lengths
Area 2: Crawl or Elementary back stroke	4 lengths 4 lengths	10 lengths 10 lengths
Area 3: Breaststroke	4 lengths	10 lengths
Area 4: Sidestroke or Overarm sidestroke Half the distance swum on each side	4 lengths 4 lengths	10 lengths 10 lengths
Area 5: Distance Any coordinated stroke or combination of strokes swum without stopping at ends for rest	¼ mile (18 lengths)	½ mile (36 lengths)
Area 6: Supplementary strokes Butterfly Inverted breaststroke Double trudgeon Single trudgeon Trudgeon crawl	2 lengths 2 lengths 4 lengths 4 lengths 4 lengths	5 lengths 5 lengths 10 lengths 10 lengths 10 lengths
Area 7: Special credit Basic dive Pass 4 written tests (short ones)	¼ credit for each of these	

A Student-Designed Program

By George Pastor

Director of Physical Education,
Silverton High School
Silverton, Colorado

The physical education course available to 11th and 12th graders at Silverton High School in Silverton, Colorado, is elective and completely planned by the students themselves. Silverton is a small, isolated mining town with a population of less than a thousand. For the first two years of high school, a typical, institutionally required core program is offered. For the junior and senior years, however, the physical education director has put into operation the idea of using one of America's most superb scenic environments to supplement the common stock of textbooks, curriculum outlines, and outdated physical education practices.

The primary objective of the two-year elective course is to induce involvement by giving participating students a voice in curriculum construction. Course integration was a factor in the change. And it was actually a unit of sociology class that brought about curriculum design, calling for such relevant, meaningful courses as skiing, backpacking, fly fishing, and mountaineering.

One of the ways by which attention was initially turned to the relevance of the surroundings was through an Alpine Club. The local mountains offered opportunities for both mountaineering and skiing, including overnight ski touring. Originally offered for the non-basketball and non-baseball player, the club soon attracted wider participation. It introduced students to new recreational activities, and when it came time to select units of concentration for the two-year electives course in physical education, members of the Alpine Club made up a strong lobby.

The course, as finally determined by the students, thus included new and challenging units in Alpine and Nordic skiing, backpacking, orienteering, and mountaineering, along with such standard activities as badminton, first aid, soccer, circuit training, softball, and volleyball.

The class met three days a week during the last period of the day to allow for "stay overs." Although much of the introductory work in fly fishing, mountaineering, and skiing was done on school premises, the bulk of the activity had to be done after school and on weekends. This involved changing some of the established value systems of many students, whose recreational activities had previously been limited to driving cars up and down the main street.

Beginning with only a small enrollment, the elective physical education class has grown in popularity each term. Glowing reports of challenging weekend adventures were a major influence.

The weekend trips—made voluntarily—included a cross-country ski tour in the high country above Aspen, a backpacking expedition to the isolated Havasupai Indian Reservation 11 miles into the Grand Canyon where physical education goals were integrated with social studies projects like studying federal aid to Indians, and a weekend of harvesting crops with migrant workers in the San Luis Valley.

Such a course demands much more time—on the part of both instructor and students—than is generally expected for a standard physical education class. But cost never proved to be a problem. The home economics department came up with some amazing ways to cook rice in a billy can, keeping food costs low. A shop class made hunting bows used later in an archery course. Local merchants gave discounts on fishing rods to help those students whose families didn't have them. And the local ski patrol swap operation was in inexpensive source of equipment.

The sources exist, if the interest is there. Giving high school students a chance to design their own programs leads to relevance in more ways than one. The new electives course at Silverton High School has done more than extend physical education activity beyond the gym and the playing field. It has broken the bondage of the classroom wall to teach young Silvertonians a love for their mountain environments and ways to life that traditional education encouraged them to ignore.

Contingency Contracting

By Barbara L. Fast

Instructor in Physical Education,
Ft. Pierce Central High School
Ft. Pierce, Florida

Emphasis in current educational practice is on individualized instruction. But with the large numbers of students often scheduled for physical education classes, attempts toward working with large groups on an individual basis are extremely difficult. One approach found successful in the girls physical education program at the Ft. Pierce Central High School in Ft. Pierce, Florida, is contingency contracting.

As with any innovation, this technique has its problems. But neither student nor teachers were content to continue following the rutted paths of traditional education. Experimentation with contingency contracting brought new vitality and relevance to the physical education offerings for Ft. Pierce students.

All seniors and students taking physical education as an elective in the 11th grade are enrolled in a class. Those who so desire are permitted to pursue units of study of their own choosing. They report to class only for attendance purposes. This serves to cut the size of the regular class taught in the traditional manner, helping to make it more effective, while at the same time the elective can become a meaningful and relevant experience.

Copies of contracts for various units are kept in folders or packets in an area also containing materials which will aid the student with the task of fulfilling the contract. A large number of students can work on the same unit at one time because of the variety offered in the contracts.

Each student examines the contract work packets for a particular unit, then selects one contract which she wishes to do. Upon completion, a new contract is made. Selections may follow any order so long as the three required work packets are completed as part of the total points earned by the end of each unit.

The point value for each contract is five points, multiplied by that contract's level of difficulty, ranging from one to five. Further points may be added or subtracted as bonus or penalty points.

The student sets her own work pace, stipulating when she plans to complete the assignment selected. If she fails to abide by her set schedule, penalty points are deducted (one point per day). Bonus points are added by the instructor as the quality of work merits (maximum bonus points are set for each level). Students can further contract for a project of their own devising, with the instructor setting the level of difficulty.

A worksheet is kept for each student. It records the contract numbers (including the three required contracts designated for each unit and the choices), level, starting date, due date, completion date, point value of the contract, penalty points, bonus points, and the final score.

Grades are determined as follows. To earn an A, 100 points must be earned; for a B, 90 points; for a C, 75 points; for a D, 70 points. No contract fails. If the work is not adequately done, it is returned and must be done over.

Unit on Bowling

Sample Contracts Contracts 1, 2, and 3 Are Required

Contract 1: (Level 4—20 point value)
Bowl six games at any lane. Keep your score. Copy your game scores on the enclosed sheet in this packet. On a separate paper, state the two basic rules for scoring. List the symbols used in scoring and tell their meaning. Your score sheets will be graded for accuracy.

Contract 2: (Level 3—15 point value)
Research and write a paper on the history of bowling, using at least three resources. The paper should be double-spaced, preferably typed, and should include a bibliography.

Contract 3: (Level 2—10 point value)
Learn the correct way to pick up a ball, how to hold the ball, and be able to demonstrate the hand positions, footwork, and release. Further, be able to demonstrate the position of the hand that creates a hook ball, a straight ball and a back-up ball. Evaluation will be based on an oral explanation to the instructor.

Contract 4: (Level 5—25 point value)
Observe the Ft. Pierce Women's City Bowling Tournament for an hour or an hour of league bowling. Report in writing how this type of bowling differs from open bowling.

Contract 5: (Level 3—15 point value)
From the enclosed rule book put out by WIBC find out what special prizes are given in sanctioned leagues. Illustrate the patches and/or pins, then explain what they are given for.

Contract 6: (Level 4—20 point value)
Visit a lane and have the proprietor show you the automatic pin setter in operation, how to operate the ball cleaner, how to turn on the teleprompter, how to reset the pins, where the trouble bell is located, where the foul light indicator is located, and how the foul line operates. When you feel that you are ready, take a short quiz on this information from the instructor.

Contract 7: (Level 2—10 point value)
Make a poster showing a lane diagram. Enlarge and make off-set drawings of the approach area and the pinfall area. Write a short paper telling how one could use this information when bowling.

Contract 8: (Level 1—5 point value)
Locate your posted average at the lane. Explain in a brief paragraph how this figure was computed.

Contract 9: (Level 5—25 point value)
Practice spare bowling of a single pin until you can make four out of 10 shots. Have the proprietor take all but one pin out of the rack, and shoot at any set that the automatic pin spotter sets. When you are ready to test yourself, try 10 consecutive shots and record your score as either a miss or a spare. Use the form enclosed in this packet.

Contract 10: (Level 1—5 point value)
Compile a list of at least 15 bowling terms and give a definition of each.

Contract 11: (Level 1—5 point value)
Work the bowling crossword puzzle found in this packet and turn in to the instructor.

Contract 12: (Level 5—25 point value)
Take a written multiple-choice examination over bowling which will cover the following: etiquette, scoring, handicaps and averages, technique, terminology, and history. You must score 85 percent or above to receive the contract point value.

Contract 13: (Level 3—15 point value)
Secure a bowling film and show to your class. Prepare 10-question quiz on the film and administer to class.

Contract 14: (Level 2—10 point value)
Prepare with a bowling motif the large bulletin board in the physical education locker room. The assignment will be judged on the basis of originality of presentation, eye appeal, balance, color, significance or value.

Contract 15: (Level 1—5 point value)
Find out what is considered to be proper bowling attire. Model for the class and explain why this type of gear or clothing is used.

Contract 16: (Level 1—5 point value)
Be able to demonstrate the proper stance, the four-step delivery, and what position the hands are in with each step.

Contract 17: (Level 1—5 point value)
(1) Using a real bowling ball, show how to select a ball which fits your hand, (2) be able to show how one can tell the weight of the ball selected, and (3) show how you can identify the ball you are using. Evaluation will be a verbal demonstration to the instructor.

Contract 18: (Level 3—15 point value)
Write a paper describing the following: Moonlight Bowl—Headpin tournament—3-6-9 tournament.

Contract 19: (Level 2—10 point value)
Watch a professional bowling match on TV, on Saturday afternoon at 3:30 on Channel 4. Write a one-page report of your reaction or observations.

Contract 20: (Level 2—10 point value)
Bowl a three-game set with a partner. Watch for her errors. List on a paper movements which were done well and those movements which were improper.

Contract 21: (Level 5—25 point value)
Read a book on bowling and give a brief resume of the contents. Write a critique of the book.

An Individualized Approach to Learning

By Robert D. Shrader

Supervisor of Physical Education,
Omaha Public Schools
Omaha, Nebraska

A dramatically new physical education program has been developed and is currently in the implementation stage in a portion of the public schools of Omaha, Nebraska. It embraces the dual concepts of student-centered learning and an individualized curriculum.

Many radical changes were made in the traditional program to implement the new approach to learning in physical education. These processes include:

1—Arranging learning tasks, both cognitive and psychomotor, upon a learning continuum. Progression charts and Bloom's Taxonomy aided in this endeavor.

2—The development of a completely new learning model—or learning flow system—that allows each individual learner to regulate or control his own learning.

3—Changing the role of the teacher from a presenter or demonstrator to a facilitator of learning.

4—Changing the traditional gymnasium setting into a learning laboratory that promotes self-directed learning. Listening stations, viewing stations, reading stations, discussion stations, practice areas, diagnostic-prescriptive stations, evaluation stations, activity areas, and central resource centers are included in the learning laboratory.

5—Placing the student in a situation whereby he directs his own learning. The key is to assist the student to learn *"how"* the process works through successful experiences positively reinforced.

6—Providing opportunities and a setting for each student to teach or assist other students.

7—Elimination of the number or letter grading or evaluation system and introducing a continuous progress reporting system.

8—Introduction of relevant, cognitive learning tasks at the appropriate level. AAHPER's *Knowledge and Understanding in Physical Education* was used as a frame of reference.

The Omaha program is based upon the following principles:

- Learning is enhanced by the use of a variety of learning strategies.

- Learning is enhanced by the use of self-pacing methods.

- Learning is enhanced through self-direction or self-learning.

- Learning is enhanced by determining each student's individual educational needs, then prescribing a program to meet these needs.

- Learning is enhanced when learning objectives are clear and are stated in behavioral terms.

- Psychomotor learning is enhanced by first learning relevant cognitive factors.

- Learning is enhanced through *successful* experiences that are positively reinforced.

New Role for Teachers

In the new learning model the teacher's roles have been radically changed. These now include:

Diagnostician—The teacher determines each individual student's learning status and educational needs.

Prescriber—The teacher prescribes learning activities for each individual student based upon his educational status and needs.

Guide—The teacher arranges and/or organizes the educational setting in such a way as to permit self-learning to flourish.

Evaluator—The teacher determines the degree of each student's success in meeting his educational objectives. The new learning model enables the teacher to evaluate each student individually.

Follow-Up—The teacher provides a source of positive reinforcement to the student. The teacher assists the student with challenge or related learning activities. The teacher's new roles do not include that of a presenter. Much more time is available to perform the diagnosing, prescribing, guiding, evaluating, and follow-up functions.

Changed Role for Students, Too

The student's role has also changed. He is now able to direct his own learning within the structure of the new learning model and to progress through the units at his own pace. The program incorporates the concept of students helping each other with their learning tasks. Student progress is readily ascertained by examining an individual profile chart that depicts progress in the psychomotor domain, the cognitive domain, and also the affective domain (challenge).

Stating the principles of the new curriculum from the standpoint of the student, they are as follows:

- It is student-centered.
- It is self-directed.
- It is self-pacing.
- Learning objectives are stated in behavioral terms.
- Success is emphasized.
- Successful tasks are positively reinforced.
- Continuous progress reporting techniques are used.
- Opportunities to help other students by assisting or teaching are available.
- Consultation with the teacher on a one-to-one basis is a regular occurrence.
- Opportunities to learn the important cognitive concepts relative to physical education are incorporated into the program.
- A variety of learning strategies is available to each student.

Individualized learning units have been developed for use by both boys and girls in the following areas: archery, body mechanics, basketball, badminton, gymnastics, softball, soccer, rope skipping, track and field, volleyball, physical conditioning, tennis, golf, swimming, diving, and square and round dance. There are also units in flagball, wrestling, and weight training for boys and modern dance for girls.

Materials and Hardware

Materials such as loop films, transparencies, listening tapes, reference books, videotapes and wall charts have been supplied in quantity to each participating school. Also developed and supplied in quantity are individual learning contracts, student continuous progress report cards, student building block sheets, and teacher guides.

Machines and hardware needed to implement the new curriculum, supplied on the building level, are: ektograph 120 cartridge projector, overhead projector, audiotape player, viewing screens, materials cart on wheels, chalkboard and display board, videotape player, record player, reference bookshelves, film strip projector, tables, desks, and chairs.

A Different Learning Space

An important element of the new curriculum is the learning laboratory. Learning centers need to be established indoors; they must be semi-permanent. These centers contain the machines and materials that students need to direct their own learning. Areas must be designated for student practice. And space is also needed for a diagnostic-evaluation center.

It is necessary to understand that each school building's learning laboratory may be different. It is possible to adapt many different kinds of rooms. The learning space also needs to be adapted for different units of instruction. For example, in units such as basketball, the teacher diagnostic-evaluation center would be moved to a space away from the practice areas.

Procedures

The new approach to physical education used in the Omaha schools operates in the following manner:

Step 1: Each student is pretested to determine his present education status. Cognitive and psychomotor learnings are determined (diagnosis).

Step 2: Each student is given an individual prescription (phy-pak) based upon his present educational status and learning needs (prescription).

Step 3: The student pursues his learning task until he feels he has reached his learning objective. The self-test helps the learner decide (peer reinforcement).

Step 4: The student comes to the teacher for final evaluation. This includes challenge activities as well as cognitive and psychomotor tasks. Positive reinforcement occurs as a result of: (1) successful task completion, (2) peer acknowledgment, (3) teacher confirmation and approval, and (4) recording progress mark on record card.

Step 5: The teacher determines whether or not the student has completed his task successfully, the teacher then: (1) positively reinforces, (2) records the information on the student progress chart, and (3) prescribes a new learning task (phy-pak) based on need (evaluation).

If the student has not completed the task successfully based upon the learning objective, the teacher then offers possible alternative ways of reaching his objective. The teacher has an excellent opportunity to offer encouragement here if needed.

Because the teacher-student contact is one-to-one, the teacher has the opportunity to reinforce each successful task, suggest possible challenge activities, provide encouragement if necessary, and accentuate the positive.

Phy-Pack

The prescription instrument for the educational task to be learned has been labeled a *phy-pak*. The phy-pak is, in reality, a student contract that provides the ingredients the learner will need to accomplish his learning task.

The phy-pak is made up of nine parts:

1—Content Classification: This merely states the task or concept to be learned. It might be the backward roll (which would be a psychomotor task) or it could be a cognitive task such as shock absorption.

2—Purpose: This part of the contract tells the learner what this phy-pak will do for him. An example: This contract provides you with learning activities that will enable you to learn to perform the backward roll.

3—Learning Objectives: This is the behavioral objective that tells the learner under what conditions he will learn, what he is to learn, and how he will behave when he has learned. Example: Given a tumbling mat and after a brief warm-up period, you will be able to perform the headstand for a period of three seconds, demonstrating the form illustrated.

4—Diagnostic Test or Pretest: This test determines the status of the learner. If the learning task is psychomotor, then the learner is given a paper and pencil test to determine his understanding of the concept to be learned. If the learner successfully passes the diagnostic test, he moves on to another learning task. If not, he then will be given the appropriate phy-pak that will help him pass the final test or the learning objective.

5—Taxonomy Category: The learning tasks have been placed on a continuum by class and degree of complexity. In order to do this job, Bloom's Taxonomy was employed. Other appropriate task categories have been developed by the research team as the need arose.

The learning tasks have been arranged in the following manner for prescription purposes:

Psychomotor	*Cognitive*	*Affective*
Frequency	Knowledge	Receive
Energy	Comprehension	Respond
Duration	Application	Value
Form	Analysis	Organization
Accuracy	Synthesis	Characterization
	Evaluation	

A coding system is presented on each phy-pak under taxonomy category to enable the prescriber to determine the complexity, class, and degree of difficulty of each contract.

Example: Taxonomy Category—Tip Up (PM 3-4). This would mean a psychomotor skill involving duration and form.

Example: Taxonomy Category—Rotary Velocity (COG 3). This is a cognitive concept presented at the application level.

6—Learning Activities: The learning activities section of the contract points out to the learner a variety of ways or strategies the learner may teach himself the skill, concept, or activity. On each contract many different choices are available to the learner. He may select any or all that will help him learn or, in essence, teach himself. Since students are different, learn at different rates, and learn in different ways, it follows that different strategies must be available to each learner. The old or traditional approach assumed students were alike, therefore all were taught the same way.

7—Self-Test: This section helps the student decide if he is ready for the final test.

8—Final Test: The final test is an observable measure of the learning objective. The psychomotor tests are usually an objective judgment made by the teacher as to the learner's completion of the learning objective. Cognitive final tests are five-item multiple-choice tests that pertain to the learning objective. This five-item test is used for objectivity and for ease in marking. A matrix or marking overlay is provided with each final test for simplified marking. It must be remembered that only the stated learning objective is evaluated. Superfluous items or concepts are not considered and measured.

9—Challenge Activities: The challenge section of each contract deals with the affective domain (assisting or helping someone else). After students have mastered a skill or concept, they may assist or teach this skill or concept to a classmate. If, in fact, a student helps teach an activity to a classmate, then he is reinforced for this service by recording the result of this service on his progress report card. It must be emphasized that challenge activities are on a voluntary basis. If the student performs an educational service to another student that is classified in the teaching realm, he is given the credit of I. If he performs a lesser service, he is given the credit of X. This lesser service could be judging a self-test, serving as discussion leader, or evaluating a cognitive test. The challenge area deals with social responsibility, with caring for others, and with helping others.

New Pathways to Quality

Implementing this new learning model for physical education is a real challenge for the teachers in the 25 Omaha schools which have instituted the program. Recognizing the uniqueness of each individual and then attempting to provide a meaningful educational experience for each student based on need is truly a monumental undertaking. It calls for and is receiving the dedication, creativity, and resourcefulness of public school physical education teachers. The new learning model charts exciting and promising pathways leading to the ultimate goal of quality education for all.

Performance Objectives for an Entire Curriculum

By Walter D. Sherman

Instructor in Physical Education and Coach,
Glenbrook North High School
Glenview, Illinois

A project to develop performance objectives for the entire physical education curriculum at the Glenbrook North High School in Glenview, Illinois, was begun over two years ago. Three teachers met together one period every morning for an entire school year to write the objectives.

They began by taking a good hard look at what they were doing in their current program—and why. They determined the scientific and philosophical basis for their program, building from the AMA's statement on effective instruction and the NEA's endorsement of the Seven Cardinal Principles of Education.

The program involved daily physical education instruction for all students (including the handicapped), plus a recreational, intramural, and interscholastic athletic program and a three-year health progression. The aim was physical health as defined by the World Health Organization.

General objectives were established, dealing with organic, neuromuscular, emotional, social, and mental development, and a detailed statement was prepared for each objective. From this foundation, they began to build the performance objectives, beginning with gymnastics (since one of the committee members was an outstanding gymnastics instructor). As an example, performance objectives for the gymnastics unit are given below.

All *freshman* physical education students receive a five-week unit in gymnastics. It is divided into a ten-day introductory unit and a three-week advanced unit. Given a lecture and a demonstration of the 40 selected gymnastic stunts, with the 10-day introductory unit of instruction and practice, the student then performs in a satisfactory manner as predetermined by the instructor:

16-28	stunts for a grade of A
10-15	stunts for a grade of B
6-9	stunts for a grade of C
3-5	stunts for a grade of D
0-2	stunts for a grade of F

Given an advanced three-week unit of instruction in gymnastics and further demonstration of the 40 selected gymnastic stunts, the student will, beginning from the point of his achievement in the introductory unit, continue to perform stunts in a satisfactory manner as predetermined by the instructor:

29-40 stunts for a grade of A
16-27 stunts for a grade of B
10-15 stunts for a grade of C
6-9 stunts for a grade of D
0-5 stunts for a grade of F

In the *sophomore* gymnastics unit, the student will be given a demonstration of compulsory gymnastic routines on four different pieces of apparatus and three weeks of instruction and practice on the four routines. Acceptable performance, as predetermined by the instructor, will give the student a grade of C for the piece of apparatus. The skills grade for the unit will be based on the average of the four grades.

Acceptable performance of one compulsory routine, plus one of the optional stunts, will give the student a skill grade of B for that piece of apparatus. Acceptable performance plus two optional stunts will gain a grade of A.

For *juniors and seniors,* the three-week unit in gymnastics is elective. They do not have to work compulsory routines or work on all of the pieces of the apparatus. They pick an event, or events, that they would like to work on and progress at their own rate. Before starting his specialization, the student must demonstrate, to the satisfaction of the instructor, that he is capable of specialization on that piece of apparatus. The grade is based on the difficulty of stunts, form, originality, and execution, as judged by the instructor.

Safety is an important aspect of all the gymnastics instruction. The class is first taught the elements of spotting and the special safety requirements. The overhead rigs are used as much as possible, as are other devices that assist the performer in executing the stunt. The following objective regarding safety was written:

- Given instruction and a demonstration of the proper spotting techniques for the four pieces of apparatus, the student will master these techniques and be able to explain orally and physically demonstrate a sense of responsibility in using these whenever spotting for another student.

The performance objectives for the soccer unit were presented in a slightly different pattern, as follows:

- All sophomores will be required to participate in a three-week soccer unit. The students will receive instruction and practice in the basic fundamentals of soccer. These basic skills will include: push pass, kicking goals, trapping, heading, throwing ball in from out of bounds, dribbling, kicking (football style), team tactics, and knowledge of rules. The student will demonstrate in drills and in a game situation that he has mastered these basic skills of soccer to the satisfaction of the instructor.

- The student will also display the following mental, emotional, and social concepts during the soccer unit: teamwork, position, endurance, time, emotional control, comeback, adjustment, determination, daring, alertness, perception, judgment, readiness, and strategy.

The working committee wrote performance objectives for the activities in the entire four-year curriculum. Last year, the freshmen and sophomores were scheduled for classes with those teachers who chose to work with the new concept. Since the juniors and seniors remained in a traditionally patterned program, the school could give its teachers this choice. The results of the first year's experimentation convinced the administration that this approach is a great step forward for the improvement of instruction and interpretation of physical education.

How To Help the Handicapped Without Hiring More People

By Hollis F. Fait and John M. Dunn

Professors of Physical Education,
University of Connecticut
Storrs, Connecticut

Physical educators are, for the most part, committed to the concept that handicapped students need and deserve to be provided with a program of motor activities equal to that provided for the non-handicapped school population. Nevertheless, there are still many schools in which no special physical education program is being offered to those with handicapping conditions that prevent their participation with benefit in the regular program.

The reason for this deficiency is generally attributed to inadequate funding: the budget simply cannot be stretched sufficiently to permit faculty to be hired to handle the additional and specialized classes that appear to be required for handicapped students. While additional faculty with special training is the most desirable means of implementing a good program for the handicapped, particularly when the time and energy of faculty members are already overextended, possibilities for expanding and improving the opportunities do exist without increasing the number of staff members.

One possibility lies in the increased use of independent study and other self-directed learning procedures in the regular physical education class. The flexibility of these procedures enable handicapped students to select self-satisfying activities, commensurate with their limitations, in which they can participate in the same class as their non-handicapped peers. Thus, it is possible to offer a program for the handicapped that meets all of the desired objectives without additional demand upon the teacher's time. The teacher's responsibilities, which include assisting in the activity selection procedure, meeting with the student periodically to answer questions and give guidance, providing skill instruction as needed, and suggesting suitable reference materials, are the same for all students. A handicapping condition does not increase the teacher's workload. It is no more time consuming than any other type of individual problem would be.

It is also possible to provide a program for handicapped students using traditional class organization—without expanding the size of the staff or unduly burdening the teachers involved. This is accomplished by an organizational pattern called the dual program. Briefly, the program consists of scheduling separate classes for the handicapped at the same hours that regular classes are scheduled. At any given hour, the students meet together for roll call and for instructions on the class procedures for that class period. Those students whose handicapping conditions are such that they cannot participate to their benefit in the scheduled activity are then excused to go to a special area that has been set aside for their use. They begin their assigned activity while the teacher starts the regular class. The assigned activity may be one that has been selected by the teacher with regard to the abilities and needs of the individual student and the safety with which he can participate in it. Or it may be an independent study, worked out between the student and teacher. In either case, reading references, visual aids, and programed instruction materials may be provided to assist the student in acquiring and adapting the skills of the activity.

The teacher moves back and forth between the two groups to give instruction, offer encouragement, and assist as needed. At any time that an activity is being offered in the regular class in which the handicapped student can participate safely and successfully, he is integrated into the class. Consequently, the dual program offers the handicapped student the advantages of participating with his peers when his abilities allow but also protecting him, when the activity is disadvantageous to him, by removing him to the more sheltered situation.

The dual program does require careful initial planning, but once established it usually operates effectively without greatly increasing the amount of time the teacher must devote to it. Volunteer or employed teacher aides have been found particularly useful in the dual program. Skilled students can also be effectively utilized as assistants to the instructor.

In any school situation, there may be a small percentage of handicapped students for whom both of the suggested programs would be contraindicated. These are students with such severe disabilities that considerable adaptation in the physical education activities is essential, and frequent teacher contact is an absolute necessity. For such children a separate adapted program is indispensable.

To provide the necessary segregated adapted classes requires ingenuity. One suggestion, which has successfully been utilized, is for the school administration to schedule physical education faculty members for adapted classes in lieu of non-academic duties, such as cafeteria or study-hall supervision. This arrangement is not unique. In many school districts, teachers of the athletically gifted, the coaches, are already excused from such duties so that they may effectively carry out their coaching assignment.

This plan may not appeal to physical educators who believe that professional services should be rendered only when they are paid for. Although this argument is sound, it is not consistent throughout the physical education program, as evidenced by many coaches who have volunteered services or worked for minimal pay so that athletic programs can be provided for the more physically gifted students.

The lack of expertise among incumbent members of the staff is the other great deterrent to establishing special physical education classes for the handicapped, as indeed it should be. A poor program, in this case, is worse than no program at all. However, there are several steps that can be taken to increase the ability of the staff to serve the handicapped. The suggestions offered below can be implemented with a minimum expenditure of time and money.

1—One member of the professional staff can be designated as the resource person for the adapted program. Naturally, the individual selected should be interested in the handicapped and willing to increase his knowledge through additional course work. The resource person's duties would include collecting and disseminating information about physical education procedures that have been employed successfully with the handicapped. He would also serve as a consultant to the other staff members, helping them to develop effective physical education programs for the handicapped.

2—Several inservice departmental workshops can be developed to increase the knowledge of the entire staff about the cause and nature of the various disabilities and the most effective instructional procedures for each.

3—When positions become vacant, top priority should be given to hiring individuals trained in special physical education to fill the vacancies.

As a final word, it should be said that, however difficult the problems of initiating physical education opportunities for the handicapped, the rewards make the effort worthwhile. There is first the satisfaction of having served a badly neglected portion of the student population. Secondly, there is the growth of official and public support for the program, stimulated by the interest and enthusiasm expressed by the students. Such support is not only personally gratifying, it also may ensure larger appropriations for the improvement of the program.

> Success in working with exceptional children and adults is dependent upon understanding their special problems. It is significant that for most disabled people the major problems are psychological in nature rather than physical . . . Because these problems are frequently more difficult to alleviate than the physical problems arising from the incapaciting illness or injury, their solution often constitutes the major obstacle in the total education of the handicapped . . . In addition to helping others understand and accept the handicapped, an educational program should be directed toward helping these youngsters develop skills and abilities to offset their physical shortcomings, and to find satisfactory substitutes for the desires they cannot attain and the activities they cannot perform.
>
> —Hollis F. Fait, *Special Physical Education*

Appendix D

Selected References

Pre-School and Elementary School Physical Education

American Association for, Health, Physical Education, and Recreation, *Planning Areas and Facilities for Health, Physical Education and Recreation*, Washington, D. C.: AAPHER, 1965.

Anderson, Marian H., Elliot, Margaret E., and LeBerge, Jeanne, *Play With A Purpose: Elementary School Physical Education*, New York: Harper and Row, 1966.

Barrow, Harold M., *Man and His Movement: Principles of Physical Education*, Philadelphia; Lea and Febiger, 1971.

Bilbrough, A., and Jones, P., *Physical Education in the Primary School*, London: University of London Press, 1968.

Bucher, Charles A., *Administrative Dimensions of Health and Physical Education Programs, Including Athletics*, St. Louis: C. V. Mosby Co., 1971.

Corbin, Charles B., *Inexpensive Equipment for Games, Play, and Physical Activity*, Dubuque, Iowa: William C. Brown Co., 1972.

Clarke, H. H., *Application of Measurement to Health and Physical Education*, Englewood Cliffs, N.J.: Prentice-Hall, 1967.

Cunningham, J., Kirchner, G., and Warrell, E., *Introduction to Movement Education*, Dubuque, Iowa: William C. Brown Co., 1970.

Dauer, Victor P., *Dynamic Physical Education for Elementary School Children*, Minneapolis: Burgess Publishing Co., 1968.

Daughtrey, Grayson, and Woods, *Physical Education Programs: Organization and Administration*, Philadelphia: W. B. Saunders Co., 1971.

Fait, Hollis F., *Physical Education for the Elementary School Child: Experiences in Movement*, Philadelphia: W. B. Saunders Co., 1971.

Inner London Education Authority, *Educational Gymnastics, A Guide for Teachers*, London: 1966.

Kroll, Walter P., *Perspectives in Physical Education*, New York: Academic Press, 1971.

Lamb, David R., Loy, John W., Kleinman, Seymour, Malina, Robert M., and Singer, Robert N., *Physical Education: An Interdisciplinary Approach*, New York: The Macmillan Co., 1972.

Lawther, John, *The Learning of Physical Skills*, Englewood Cliffs, N.J.: Prentice-Hall, 1968.

MacKenzie, Marlin M., *Toward A New Curriculum in Physical Education*, New York: McGraw-Hill Book Co., 1969.

Mauldon, E., and Layson, J., *Teaching Gymnastics*, London: Macdonald and Evans, 1965.

Metzger, Paul, *Elementary School Physical Education*, Dubuque, Iowa: William C. Brown Co., 1972.

Mosston, M., *Teaching Physical Education from Command to Discovery*, Columbus, Ohio: Charles E. Merrill Books, 1966.

Oxendine, Joseph B., *Psychology of Motor Learning*, New York: Appleton-Century-Crofts, 1968.

Randall, Marjorie, *Basic Movement: A New Approach to Gymnastics*, London: G. Bell and Sons, 1963.

Russell, Joan, *Creative Dance in the Primary School*, London: Macdonald and Evans, 1965.

Sheehan, Thomas J., *An Introduction to the Evaluation of Measurement*, Reading, Mass.: Addison-Wesley Publishing Co., 1971.

Schurr, Evelyn L., *Movement Experiences for Children: Curriculum and Methods for Elementary School Physical Education*, New York: Appleton-Century-Crofts, 1967.

Sidentop, Daryl, *Physical Education: Introductory Analysis*, Dubuque, Iowa: William C. Brown Co., 1972.

Singer, Robert N., *Motor Learning and Human Performance*, New York: The Macmillan Co., 1968.

Secondary School Physical Education

American Association for Health, Physical Education, and Recreation, *Knowledge and Understanding in Physical Education*, Washington, D.C.: AAHPER, 1969.

American Association for Health, Physical Education, and Recreation, *Physical Education for High School Students*, second edition, Washington, D.C.: AAHPER, 1970.

American Association for Health, Physical Education, and Recreation, *Planning Areas and Facilities for Health, Physical Education and Recreation*, Washington, D.C.: AAHPER, 1965.

Broer, Marion R., *An Introduction to Kinesiology*, Englewood Cliffs, N.J.: Prentice-Hall, 1968.

Bucher, Charles A., *Administrative Dimensions of Health and Physical Education Programs, Including Athletics*, St. Louis: C. V. Mosby Co., 1971.

Bucher, Koenig, Barnhard, *Methods and Materials for Secondary School Physical Education*, St. Louis: C. V. Mosby Co., revised edition. 1970.

Clarke H. H., *Application of Measurement to Health and Physical Education*, Englewood Cliffs, N.J.: Prentice-Hall, 1967.

Daughtrey and Grayson, *Methods in Physical Education and Health for Secondary Schools,* Philadelphia; W. B. Saunders Co., 1971.

Daughtrey, Grayson, and Woods, *Physical Education Program: Organization and Administration,* Philadelphia; W. B. Saunders Co., 1971.

Falls, Harold B., *Foundations of Conditioning,* New York: Academic Press, 1970.

Fox, Edward L., and Mathews, Donald K., *The Physiological Basis of Physical Education and Athletics,* Philadelphia: W. B. Saunders Co., 1971.

Kron, Walter P., *Perspectives in Physical Education,* New York: Academic Press, 1971.

Lamb, David R., Loy, John W., Kleinman, Seymour, Malina, Robert M., and Singer, Robert N., *Physical Education: An Interdisciplinary Approach,* New York: The Macmillan Co., 1972.

MacKenzie, Martin, *Toward A New Curriculum in Physical Education,* New York: McGraw-Hill Book Co., 1969.

Means, L. F., and Jack, H. K., *Physical Education Activities, Sports and Games,* Dubuque, Iowa: William C. Brown Co., 1965.

Mosston, M., *Teaching Physical Education: From Command to Discovery,* Columbus, Ohio: Charles E. Merrill Books, 1966.

National Collegiate Athletic Association, *Official Collegiate Scholastic Swimming Guide,* Phoenix, Ariz.: College Athletic Publishing Service, 1973.

Oxendine, Joseph B., *Psychology of Motor Learning,* New York: Appleton-Century-Crofts, 1968.

Rice, Emmett A., Hutchinson, John L., and Lee, Noble, *Brief History of Physical Education,* New York: Roland Press, 1969.

Sheehan, Thomas J., *An Introduction to the Evaluation of Measurement Data in Physical Education,* Reading, Mass.: Addison-Wesley Publishing Co., 1971.

Sidentop, Daryl, *Physical Education: Introductory Analysis,* Dubuque, Iowa: William C. Brown Co., 1972.

Singer, Robert N., *Motor Learning and Human Performance,* New York: The Macmillan Co., 1968.

Von Dalen, Deobold, and Bennett, *A World History of Physical Education, Philosophical, Comparative,* Englewood Cliffs, N.J.: Prentice-Hall, 1971.

Vannier, Maryhelm, and Fait, *Teaching Physical Education in Secondary Schools,* Philadelphia; W. B. Saunders Co., 1969.

Willgoose, Carl E., *The Curriculum in Physical Education,* Englewood Cliffs, N.J.: Prentice-Hall, 1969.

Adapted, Corrective, and Developmental Physical Education

Adams, Donald C., Daniel, Alfred N., and Rullman, Lee, *Games, Sports and Exercises for the Physically Handicapped,* Philadelphia: Lea and Febiger, 1972.

American Association for Health, Physical Education, and Recreation Council for Exceptional Children, *Recreation and Physical Activity for the Mentally Retarded,* Washington, D.C.: AAHPER, 1966.

American National Red Cross, *Swimming for the Handicapped,* Washington, D.C.: American National Red Cross, 1969.

Anderson, Robert M., *Instructional Resources for Teachers of the Culturally Disadvantaged and Exceptional,* Springfield, Illinois: Charles C. Thomas, Publisher, 1970.

Buell, Charles E., *Physical Education for Blind Children,* Springfield, Ill.: Charles C. Thomas, Publisher, 1966.

Cheney, Arnold B., *Teaching Culturally Disadvantaged in the Elementary School,* Columbus, Ohio: Charles E. Merrill Publishing Co., 1967.

Cratty, Bryant J., *Movement and Spatial Awareness in Blind Children and Youth,* Springfield, Ill.: Charles C. Thomas, Publisher, 1971.

Davis, Patricia A., *Methods and Aids for Teaching the Mentally Retarded,* Minneapolis: T. S. Denison and Co., 1970.

Fait, Hollis F., *Special Physical Education,* Philadelphia: W. B. Saunders Co., 1966.

Mackett, Layne C., *Movement Exploration and Games for the Mentally Retarded,* Palo Alto, Calif.: Peek Publications, 1970.

Harvat, Robert W., *Physical Education for Children with Perceptual-Motor Disabilities,* Columbus, Ohio: Charles E. Merrill Publishing Co., 1971.

Hewett, Frank M., *The Emotionally Disturbed Child in the Classroom,* Boston: Allyn and Bacon, 1968.

Hofmann, Ruth B., *How To Build Special Furniture and Equipment for Handicapped Children,* Springfield, Ill.: Charles C. Thomas, Publisher, 1971.

Humphrey, James H., and Sullivan, Dorothy D., *Teaching Slow Learners Through Active Games,* Springfield, Ill.: Charles C. Thomas, Publisher, 1971.

Kolstoe, Oliver P., *Teaching Educable Mentally Retarded Children,* New York: Holt, Reinhart, and Winston, 1970.

Michaux, Louis A., *The Physically Handicapped and the Community,* Springfield, Ill.: Charles C. Thomas, Publisher, 1971.

Nellist, Ivan, *Planning Buildings for Handicapped Children,* Springfield, Ill.: Charles C. Thomas, Publisher, 1971.

Appendix E

Movement Analysis—Based on Educational Gymnastics

By Dorothy B. Bemis

Assistant Supervisor of Physical Education, Newington Public Schools
Newington, Connecticut

BODY—What the Body Can Do

Elementary Body Management
- Locomotion, Stillness
- Weight Bearing
- Transference of Weight
  - Rocking and Rolling
  - Sliding
  - Steplike Actions
  - Flight
- Combinations of Above

Intermediate Body Management
- Curling, Stretching
- Twisting, Turning
- Swinging, Circling
- Symmetry, Asymmetry of Body Movement
- Body Shape in Actions
- Imitation and Control of Movement
- Touch and Contact Combinations

Advanced Body Management
- Enrichment of Work with Combinations of Above Themes

EFFORT (Quality)—How the Body Can Move

WEIGHT (Force)
- Strong
- Light
- Heavy

Variations

TIME (Speed)
- Quick
- Slow
- Sudden
- Sustained

Variations

FLOW (Continuity)
- Bound
- Free
- Continuous
- Broken
- Simultaneous
- Successive
- Within the Body Transition (Sequence)
  - Preparation
  - Action
  - Recovery

ACTIVITY
- Gymnastics
- Dance
- Aquatics
- Individual Sports
- Team Sports

SPACE—Where the Body Can Go

Personal Space (Kinesphere)
- Immediately Surrounding Body

General Space
- Room Space into which Body Can Travel
- Direction . . . Forward, Backward, Sideward
- Level . . . Up, Down
- Height and Distance . . . High, Low, Near, Far

Shape in Space and Floor Pattern
- Pathway of Movement

RELATIONSHIPS
- Teacher—Student
- Student—Environment
- Group
- Sequence to Apparatus, etc.

Appendix F

Tests of Physical Fitness

AAHPER Youth Fitness Test
Source: American Association For Health, Physical Education, and Recreation, 1201 Sixteeth St., N.W., Washington. D.C. 20036

California Physical Fitness Test
Source: C. Carson Conrad, Chief, Bureau of Health, Physical Education and Recreation, State Department of Education, Sacramento, Calif. 95814

Illinois Physical Fitness Test for High School Boys
Source: Walter Thorpe, Supervisor of Physical Education, State Department of Public Instruction, Springfield, Ill. 62706

Krause-Weber Test of Minimum Muscular Fitness
Source: Dr. Hans Krause, 30 Central Park South, New York, N.Y. 10019

National Physical Fitness Test
Source: President's Council on Youth Fitness, Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20401

New York State Physical Fitness Test
Source: George H. Grover, Director, Health, Physical Education and Recreation, State Department of Education, Albany, N.Y. 12224

N. R. A. Tests
Source: National Recreation Association, 8 West 8th St. New York, N.Y. 10011

Oregon Motor Fitness Tests
Source: James D. Goddard, Consultant in Health and Physical Education, State Department of Education, Salem, Or. 97310

Physical Fitness Test Manual For Elementary Schools
Source: Howard Schaub, Supervisor of Physical Education, State Department of Public Instruction, Olympia, Wash. 98501

Red Cross Swim and Stay Fit Test
Source: Any local Red Cross chapter, or Mrs. Arnold Wilkenhofer, Director, First Aid and Water Safety Services, Southeastern Area, American Red Cross, 1955 Monroe Dr., N.E., Atlanta, Ga. 30324

Standards for Junior AAU Physical Fitness Tests
Source: Amateur Athletic Union, 231 W. 58th St. New York, N.Y. 10019

Appendix G

Suggested Basic Equipment and Supplies for a Well-Balanced Physical Education Program

Elementary Physical Education

Supplies

Rubber playground balls—5″, 6″, or 7″ diameter
Rubber playground balls—8½″ diameter
Rubber playground balls—10″ diameter
Bean bags—4″ x 6″
Jump ropes—7′—8′ primary; 8′—9′ intermediate
Long Jump ropes—24′—30′
Tumbling mats 3′ x 5′ or 4′ x 6′
Rubber soccer balls
Softballs—plastic
Softballs—rubber and/or "softee"
Softball bats—wooden
Batting tees—rubber
Softball bases—rubber
Volleyballs—rubber
Volleyball nets
Basketballs—rubber
Footballs—intermediate size
Bamboo Poles—6′—8′
Pushball—24″—36″
Record player, speaker and records
Stopwatch
Tape measure—100 feet
Wands
Hoops

Equipment

Balance beam
Basketball backstops
Manila climbing ropes—2½″ diameter
High jump standards
Horizontal bars
Jungle Gym
Line marker
Monkey rings
Scales
Soccer goal posts
Tether ball poles
Traveling rings—set in either circular or straight line
Volleyball standards
Crossbars—high jump
Horseshoe sets
Air pump
Trestletree
Whittle equipment
Side horse

Trampoline
Vaulting horse
Triple horizontal bar with three fixed heights—3′, 4′, 5′
Horizontal ladders—5′ high for primary and 5½′ for taller children
Trapeze

Secondary Physical Education

Supplies

Basketballs
Footballs
Soccerballs
Volleyballs
Softballs
Softball bats
Softball bases—rubber
Batons
Tennis rackets and presses
Tennis balls
Tennis nets
Badminton rackets
Badminton shuttle cocks
Field hockey sticks
Field hockey balls
Archery arrows and quivers
Golf clubs—wood, 3 irons, putter
Golf balls—plastic
Golf balls—regular
Gym bowl kits
Bows—20, 30, 40 lbs.
Arrows
Archery targets
Target stands
Finger tabs—arm guards
Target faces
Stop watch
Measuring tape—50—100-ft.
Rubberball repair kit
Air pump or inflator
Field markers
Table tennis sets
Horseshoe sets
Sticks
Shin pads
Tees
Flags—3″ x 18″ piece of cloth or canvas
Cage ball—3′ diameter
Medicine balls
Driving mats
Woodblock—gong, cymbal
Wigwam drum
Pinnies

Equipment

Standards for tennis, volleyball, and badminton; mats for wrestling and for placement around apparatus
Tumbling mats—4′ x 6′ and 5′ x 10′
Parallel bars
Vaulting box or Swedish box
Side horse
High bar
Overhead ladder
Air pump or inflator
Climbing ropes
Peg boards
Backboards for basketball, tennis and handball
Horizontal bars
Scales
Goalkeeper equipment
Discus
Javelins
Goal uprights for football, soccer, and field hockey
Traveling rings
Flying rings
Cross bars, high jump
Horseshoe sets
Trampoline
Vaulting box
Backstops for softball and baseball
Archery targets, and golf driving net uprights
Track and field equipment—combination low and high hurdles, high jump and pole vault standards, and pole vault box.
Springboard
Shot-put balls—8-lb., 12-lb., 16-lb.
Record player

Corrective and/or Adaptive Areas

Steel bars
Wall weights and others
Mats
Full-length mirrors
Ballet wall rail

Dressing and Locker Areas

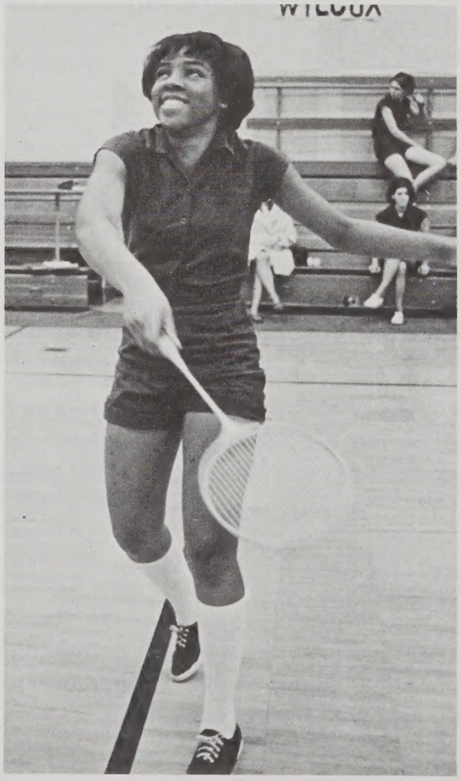
Wide benches
Lockers for storage and for class use
Locks
Hair dryers for girls
Mirrors

Emergency Care Room

Hydrotherapy and electric equipment
Splints
Cots
Stretchers

Swimming Pool

- Diving boards
- Starting blocks
- Pool hooks
- Ropes
- Buoys
- Emergency care kit



NOT TO BE TAKEN FROM LIBRARY

NOT TO BE TAKEN FROM LIBRARY

UNIVERSITY OF ILLINOIS-URBANA
3 0112 118803185

NOT TO BE TAKEN FROM LIBRARY

NORTHWESTERN UNIVERSITY LIBRARY

CURRICULUM COLLECTION
NORTHWESTERN UNIVERSITY LIBRARY
EVANSTON, ILLINOIS 60201